THE RIGHT TO THE CO-CITY*

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Abstract

This study is an effort to contribute to the current urban studies debate on the way to conceptualize the city by advancing a rights-based approach and to suggest that to build such vision one needs to reconceive the city as a commons, which is to say that the city serves as an infrastructure enabling the "pooling" of city inhabitants actions, energies, resources and the cooperation between city inhabitants and other four urban actors thereby embedding a "quintuple helix" or "pentahelix" approach in the governance design of the city. Part I articulates the most prominent visions or paradigms of the city of the 21st century and the "metaphors" that are currently used to conceptualize the city. From an interdisciplinary perspective, this part then discusses some complications and emerging key points that deserve further reflection. In Part II, the article argues that a rights-based paradigm or vision in the conceptualization of the city is emerging. It does so through the analysis of urban laws and policies adopted in exemplary case studies such as Naples and Barcelona, on one side, and Bologna and Turin, on the other side. Two main rights-based approaches seem to emerge: the rebel city model and the co-city model. In Part III, to better define this fourth urban paradigm and in particular the second approach, a focus on the key concept of *commons* and a review of the main bodies of literature is provided which are key to carve out the concept of "pooling" as a form of cooperation that encompasses both sharing of congestible resources to avoid scarcity and collaboration around non congestible, constructed resources to generate abundance. Building on the existing literature of a particular subset of studies on infrastructure commons, the concept of pooling is extracted from the observation of how pooling as a demand-side strategy can both expand or leverage the idle "capacity" of an infrastructure to avoid congestion and at the same time generate abundance. Pooling is particular effective in explaining the main features of a peculiar vision of the rights-based city, the co-city approach, ultimately envisioning the city as an enabling infrastructure for social and economic pooling. Part IV offers concluding remarks and proposes the idea of the "right to

the co-city" to build a body of urban law and policies advancing "urban rights to pooling" as a key legal tool to structure a commons-oriented interpretation of the fourth vision of the city, the rights-based approach.

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The current discourse on cities suggests to privilege the city as a focal point for scientific observation of economic and institutional innovations. Cities will be the place where most people will spend their life and work together, will help each other, will co-produce and make evolution happen, in a sustainable way. Starting from an analysis of the arguments that help define the current age as a new urban age, this paragraph will provide a brief overview over the current urban discourse as it emerges from some of the most prominent scholars engaged in the academic debate around the city. It will argue that the existing urban paradigms build on mainly three different features or driving factors: (1) knowledge; (2) sustainability; (3) technology. Almost every study on urban related issues needs to start

nowadays from data on urbanization trends and urban economy outlook, stressing the role and power that cities will exercise in the 21st century[1]. Aggregated secondary data on urbanization trends suggest that cities will be the center of social[2] and economic[3] life

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[1] The NYU Furman Center on real estate developed a data center on housing and neighborhoods data of New York City (http://coredata.nyc/). UN Habitat, through the Explore Urban Data application offers possibilities for comparing cities on the basis of economic and social indicators (http://urbandata.unhabitat.org/). The University of Glasgow promoted a research project to develop urban datasets on several issues like education, housing, transportation among the others (see http://ubdc.ac.uk/). The University of Chicago organized in 2016 one of the first convening on urban data science (http://www.urbanccd.org/urbandataconven/).

[2] At the OECD level, more than 500 million people live in urban agglomeration. OECD, *Governing the city*, 3 (2015), available at http://dx.doi.org/10.1787/9789264226500-en. The OECD also defines the 21st century as the metropolitan century, considering that by 2100 the share of the urban population is projected to reach around 9 billion (85% of the population), and cities are motors of economic growth. Through the OECD areas, productivity and wages increase with city size and metropolitan areas, together with middle size cities are a great potential in terms of job creation innovation and green growth, which implies as a consequence that the way in which cities are planned and run will have a huge relevance from a socio-economic and environmental standpoint.
 OECD, *The metropolitan century. Understanding Urbanization and its Consequences* 15 (2015), available at http://dx.doi.org/10.1787/9789264228733-en.

[3] Cities are the main creators of economic wealth, generating over 70 per cent of the world's Gross Domestic Product (GDP). There are economic benefits associated with urbanization, the agglomeration economies, that are key drivers of economic growth, but need to be harnessed in order to ensure that urbanization and economic growth of cities are strategically used in order to promote economic efficiency and social equity. UN Habitat, *Economy*, UN HABITAT (last visited 20/10/2016), available at http://unhabitat.org/urban-themes/economy/.

for humankind[4]. Cities are growing in both size and numbers[5], although with different trends (most mega-cities are in the Global South while the fastest growing cities are in Asia and Africa)

Public law scholars like Jean Bernard Auby[6] highlighted that the renaissance of cities and the growing importance of cities in comparison to power of nation states[7] is an important historical phenomenon. Political scientist Benjamin Barber has commented that one of the main differences between local and national politics relies in the pragmatic orientation of the governance approach that Mayors adopt in order to solve problem of everyday urban life, soon lacking at the national level[8]. Moreover, as Porras[9] outlined, prominent legal scholars, proponents of localism, such as Frug, Blank and Barron, have situated cities and associations of cities as a new influential actor in the international policy making arena. Cities affirmed their status of site of self-governing communities, an alternative to democratization beyond the state[10].

The choice of the city as an observation point is also suggested by the observation of the widespread of collaborative practices, that encountered an impressive evolution in recent years achieving a considerable economic[11] and social value, with a

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[4] According to data on urbanization trends produced by the UN, "in 2016, an estimated 54.5 per cent of the world's population lived in urban settlements. By 2030, urban areas are projected to house 60 per cent of people globally and one in every three people will live in cities with at least half a million inhabitants[4]" United Nations Human Settlements Program (UN-Habitat) *The World's Cities in 2016,* 2 (2016). Available online here: http://wcr.unhabitat.org/main-report/.

[5] *Id.* at 4.

[6] J.B. Auby, *The Role of law in the legal status and powers of cities*, 2 IJPL 302, 305 (2013).

[7] Khanna has stated that we are moving into an era where cities will matter more than states P. Khanna, *Connectography: Mapping the future of globalization* (2016).

[8] B. Barber, *If Mayors Ruled The World* (2013).

[9] I.M. Porras, *The city and international law: in pursuit of sustainable development,* 36 Fordham Urb. L. J 537-538 (2009).

[10] I.M. Porras, *The city and international law: in pursuit of sustainable development,* cit. at 9, 537-538.

[11] Five key sharing economy sectors (car sharing, travel, finance, staffing, music and video streaming) have a potential to increase global revenues from 15 billion dollars today to around 335 billion dollars by 2025. The business models of sharing economy platforms are changing the way consumers think about value. Experiences, in fact, increase contentment far more than purchases do. See PwC, *The sharing economy,* 15 (PwC 2015)

considerable impact on the legal landscape, particularly at the local level[12].

Few point out, however, that the explosion of urbanization is going to strongly impact the physical aspects of cities and their social fiber, possibly having consequences for urban congestion and urban wars[13]. Fewer scholars are investigating the hidden effects of urbanization, for instance Brenner observed his impact on the countryside and sites of raw materials extraction[14].

The goal of this article is to start sketching the vision of a "co-city", a city that builds on all the new patterns of the age of

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https://www.pwc.com/us/en/technology/publications/assets/pwc-consumer-intelligence-series-the-sharing-economy.pdf. Among the key disruptive lever for companies to consider in moving to a sharing economy model, PwC suggests to take into account under-usage of tangible and intangible assets owned by companies (this has to do with the idea of sharing investment cost in research and development. In the US, the report highlights, patent filers such as IBM or Sony collectively field more than 21,000 in 2013, but only a fraction of these was brought into the market because of high investment cost. General Electric created a partnership with Quirky, invertor community online, that gave open access to their patent to the community and resulted in the production of joint-venture products). See *Id.,* at 28-29. According to the EU study on the Cost of non-Europe in the sharing economy, the welfare loss from the under-utilization of labor (the largest component) accommodation, cars and other sectors is estimated to the equivalent to 572 billions of euros. P. Goudin, *Id.* at 33. P. Gouding, *The cost of non Europe in the Sharing economy,*33 (Directorate-General for Parliamentary Research Services of the Secretariat of the European Parliament 2016). http://www.europarl.europa.eu/thinktank/en/home.html.

[12] N. Davidson and J. Infranca observed that the sharing economy generates mainly externalities at the local level and it's largely a concern of local authorities. N. Davidson and J. Infranca, *The sharing economy as an urban phenomenon,* 34 Yale L. & Pol'y Rev 215, 223-238 (2016). Studies realized at the EU level highlights that policy implications for regulating sharing economy is willing to change over time, according to the development of this sector. The sharing economy is in fact likely to expand to new markets, and the peer to peer transaction share will decline. Goudin, *cit.* at 11, 19.

[13] J. Beall, *Cities, Terrorism and Urban Wars of the 21st Century',* Working Paper 9, 2 (Crisis States Research Centre, LSE 2007). The challenges that the 21st century urbanization will bring for cities are highly differentiated across countries, but among the most common features we can encounter the struggle to provide urban infrastructures (water, sanitation, electricity), air pollution, reduction of carbon footprint, improve in public transportation and connectivity, livability. OECD Report, *The metropolitan century. Understanding Urbanization and its Consequences,* cit. at 2, 120-121.

[14] N. Brenner, *Implosions/Explosions, Towards a Study of Planetary Urbanization*, (2013).

urban and the age of collaboration, considers possible downsides (a negative relation with rural and possible conflicts). In order to do so, we need to build a very simple and broad anthology of the XXI century urban visions, by first briefly describing some of the current visions of the city of tomorrow and then envision the characteristic of a co-city. The co-city also builds on the Lefebvrian vision of the "urban" as a process, rather than a fixed space[15], and therefore envisions the city as a complex adaptive and evolutionary system.

The application of complex adaptive systems' concept and theories, originated from mathematics, to social sciences[16], in particular to the analysis of cities allow us to identify some crucial features for the urban legal and policy design. The main question if one wants to conceive the city as a complex adaptive system, for Lansing, is: how can a city with millions of inhabitants avoid swings between shortage and glut without a centralized planning? The explanatory system provided by the theory of the invisible hand of the market is not enough for the author to explain the current state of the relationship between the market and society[17]. A crucial feature of complex adaptive systems is that, as Beinhocker also explains, "micro-level interactions of agents in a complex adaptive system create macro-level structures and patterns"[18]. For Lansing instead, the phenomenon can be described as "a process that seems to be governed by chance when viewed at the level of individuals turns out to be predictable at the level of society as a whole[19]". In order for global patterns of behavior to become apparent, the observer must shift the attention from the individual level causal forces to the behavior of the system as a whole. In the view of cities as a complex system, as Allen highlights, the most relevant phenomena are the *non aequilibrium* phenomena, because they offer a novel understanding of organization in systems with many interacting entities and individuals[20]. Another core aspect of the city as a complex system

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[15] *See* H. Lefebvre, *The Right to City*, Writings on Cities 147 (E. Kofman & E. Lebas eds., trans., 1968). See also N. Brenner and C. Schmidt, *The urban age in question,* 38.3 Int'l J. Urb. Reg. Res. 731, 750 (2014).

[16] J. S. Lansing, *Complex adaptive systems*, 32 Ann. Rev Antropology, 183 (2003).

[17] J. S. Lansing, *Complex adaptive systems*, cit. at 16, 183.

[18] E. Beinhocker, *The origin of wealth,* (2006), 161.

[19] J. S. Lansing, *Complex adaptive systems*, cit. at 16, 185.

[20] P. Allen, *Cities the visible expression of Co-evolving complexity,* in Juval Portugali et al., *Complexity theories have come of age 69* (2012):

is the mechanism of evolution, or co-evolution[21]. The complexity perspective views evolution from a different standpoint than the consolidated theory of social Darwinism in traditional biology does, stressing the long term adaptive capacity of cooperation. The perspective of evolutionary biology, widely studied by Edward Wilson, among the others[22], is an attempt to understand mechanism behind the evolution of the human being in the social system, looking at the biological foundation of competitive, altruistic, cooperative behaviors in order to enrich our knowledge of the relationship between nature and culture. The contribution of complexity and evolutionary theories is therefore the assumption that individuals are not inherently altruistic nor selfish, instead we can have strong reciprocity as a principle that govern cooperation among agents, the conditional cooperators, that perform better than agents following purely selfish or purely altruistic strategy[23]. A functioning evolutionary system is a system where state, market and communities are not one against the other, instead they work together to create wealth, social capital and opportunities, both competing and cooperating[24]. For providing a response to his own overwhelming complexity, the structure of society must change, since the cleavages of the previous century, state vs. market or left versus right,[25] are no more able to help policy makers to address complexity. Those patterns design different "ways of balancing the invisible system of economic self-regulation with the intentional decision making of policy makers"[26]. A new framework is needed, and it could be based teamwork rather than leadership, since it seems to be more appropriate than economic coordination or central decision to deal with complexity. Society should be thought as organized in teams and the policy challenge would then be to understand how to set up processes that create teams, and understand the way in which they might work together[27]. We will build on those ideas later in

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[21] P. Allen, *Cities the visible expression of Co-evolving complexity,* cit. at 20, 70-75.

[22] See generally E.O. Wilson, *Sociobiology* (1975). See also P. Singer, *The expanding circle: ethics and sociobiology* (1981).

[23] See generally E. Wilson, cit. at 222 and E. Beinhocker, cit. at 18, 418-419.

[24] E. Beinhocker, cit. at 18, 421.

[25] E. Beinhocker, cit. at 18, 415.

[26] Y. Bar-Yam *Teams: a manifesto,* New England Complex Systems Institute and MIT Media Laboratory, (July 31 2016), https://medium.com/complex-systems-channel/teams-a-manifesto-7490eab144fa#.36d3lr1sk.

[27] Y. Bar-Yam, cit. at 26, 2/4.

the article in order to develop the vision of a co-city and urban pools as its elementary structures.

1.1 The XXIst century city's visions

The concept of urban is a complex and contested concept. Cities are changing their role, morphology, structure while urbanization is becoming a global process. The attempt of this paragraph is to provide a rough introduction, starting from historical studies on cities, to the understanding of the most relevant visions on cities from different disciplinary perspective.

The first body of literature to be addressed conceives the city as a marketplace. The idea of a knowledge-based city stresses the feature of cities as key centers of economic production and consumption. The urban economy is assuming a central role in global economic dynamics, and relevant economic phenomena, such as the sharing economy, are inherently urban[28]. Following the intuition of prominent scholar like Jane Jacobs[29] and Paul Bairoch[30] regarding the innovation potential of cities, a powerful strand of research has been investigating the relationship between agglomeration, knowledge production and urban economic growth in cities. Economic literature has emphasized that cities are economic spaces, focusing on the positive externalities that result from agglomeration, creativity and knowledge creation and their effect on urban growth[31]. The main idea behind the paradigm of the city as an economic place is that urban economic success relies on the one hand on the positive connection between human capital and economic growth, due to the high density and

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[28] This is the case of sharing economy, as Nestor Davidson and John J. Infranca highlight in N. Davidson and J.J. Infranca, cit. at 12. The European Union made an effort in order to understand the local dimension of the sharing economy and propose a comprehensive analytical framework, see the Opinion of the Committee of the Regions of the European Union, *The local and Regional Dimension of the sharing economy,* Opinion Number: CDR 2698 (adopted on 4/12/20159, available at http://cor.europa.eu/it/activities/opinions/Pages/opinion-factsheet.aspx?OpinionNumber=CDR%202698/2015.

[29] J. Jacobs, *The economy of cities* (1969).

[30] P. Bairoch, *Cities and economic development,* (1988).

[31] Positive externalities of high density on the ecological performance has also been highlighted. There is a strand of literature that analyzed the idea of a "compact city" as an environmentally sustainable city. See C. Gaignéa, S. Riouc, J.F. Thissee, *Are compact cities environmentally friendly?* 72 J. Urb. Econ. 123, 2–3 (2012).

resulting inter connections and network. In other words, this literature focuses on the capacity of the city to be a *knowledge based – creative city,* a *consumer city*[32], and highlights how the growth of cities might bring opportunities and challenges at the same time. Urban agglomeration[33]is a positive[34] feature for economic growth, that also might result in negative externalities, such as congestion effects[35] that might represent a strong disincentive although the history of urbanization shows that cities made lot of efforts to bring them under control[36]. The emphasis placed by Florida on bohemian lifestyles is been questioned by some critics including Glaeser[37] who states that urban authorities might also invest in the urban basics, such as safety and basic public services (i.e. transportation and education), in order to reach the goal of attracting the human capital needed to drive urban economic growth[38].

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[32] E. L. Glaser, J. Kolko, A. Saiz, *Consumer city,* 1 J. Urb Geography, 27-50. (2001). See also E. Glaeser, *The triumph of the city,* (2011) and R. Florida, *Cities and the creative class*, 2 City and community 1, 7 (2003).

[33] G. Duranton and D. Puga, *Micro foundations of urban agglomeration economies,* in J.V. Henderson and J.F. Thisse (eds.), 4 *Handbook of Regional and Urban* Economics 48 (2004). As Mc Kinsey emphasized, "cities are instant markets for many types of business. As businesses cluster in cities, jobs are created and incomes rise", and agglomeration enables industries and service sectors to have higher productivity compared to the rural setting. McKinsey Global Institute*, Urban world: Mapping the economic power of cities* 11 (2011) http://www.mckinsey.com/global-themes/urbanization/urban-world-mapping-the-economic-power-of-cities. The ecological sustainability of life in a high-density city challenge the mainstream idea of the life in the country as a more environmental sustainable life. *See generally* D. Owen, *Green Metropolis,*1-39, 147-199 (2010).

[34] Among the positive externalities of agglomerations, we can comprehend the economy of scale that concentration brings: the cost of delivering basic urban services (housing and education, for instance) is 30 to 50 percent cheaper in concentrated population centers than it is in low populated areas. See McKinsey Global Institute, *Urban world: Mapping the economic power of cities* (2011), at 10-11.

[35] Traffic congestion clearly represents a negative externality of urban agglomeration. See J. Brinkman, *Congestion, agglomeration and the structure of cities*, 94 J. Urb. Econ. 13-31 (2016).

[36] A. J. Scott, *Creative cities: conceptual issues and policy questions,* 28, J. Urb. Aff. 1,1-17 (2006).

[37] S. Foster and N. Davidson, *The mobility case for regionalism,* 47 U.C.D.L. Rev. 63, 96. (2013-2014). See also E. Glaeser, *Review of Richard Florida's The rise of the creative class,* 35 Regional Sci. Urb. Econ. 5, 593-596 (2005)

[38] E. Glaeser, *The triumph of the city,* cit. at 32, 260.

A large body of academic literature related to the city has been developed to reflect on the vision of the city of tomorrow from an environmental standpoint. We can identify two main different concepts and literatures that conceive urban sustainability differently: the eco-city and the city as an ecosystem.

The eco-city approach considers how cities can achieve a better environment through the reduction in air, water and soil pollution and smart waste generation[39], while the city as an ecosystem approach is concerned about how the biophysical, social economic processes interact in the urban environment, and therefore how cities can achieve a sustainable development.

The eco-city and sustainable city literature is quite focused on the impact of cities on the natural ecological system as opposed to the idea of the city itself as an ecosystem. The idea of the eco-city has been used to describe a wide range of approaches aiming to turn cities in environmentally sustainable places[40] and at developing communities that respect the nature and have sustainable behaviors[41], while the ecological city approach is aimed at envisioning the city as the result of the interaction between biological, social, economic processes. Sheila Foster's contribution on the city as an ecological space[42] highlights that, whether designed by considering existing social networks of individuals and entities that have a common stake on the resource or rely upon it although geographically disperse, land use governance might revitalize cities and neighborhoods[43].

Finally, the paradigm of the tech-based city configures the model of smart cities and sharing cities, both still under definition. The literature on the tech-based city relies upon the idea that ICT technologies and the use of data as a tool to improve life in cities

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[39] M. Marchettini et al, *The Sustainable City. Urban Regeneration and Sustainability,* WIT Press (2014).

[40] E. Rapoport, *Utopian Visions and Real Estate Dreams: The Eco-city Past, Present and Future 8* Geography Compass 60, (2014).

[41] E.J. Junior and M. M. Edward, *How Possible is Sustainable Urban Development? An Analysis of Planners' Perceptions about New Urbanism, Smart Growth and the Ecological City,* 25 Planning Prac. & Res., 417-419, (2010).

[42] S. Foster, *The city as an ecological space: social capital and land use*, 82 Notre Dame L. Rev. 68, (2006-2007).

[43] Sheila Foster explains that this is the case of the community gardens, were a significant percentage of garden's members live outside the community where the garden is located. S. Foster, *The city as an ecological space: social capital and land use* cit. at 42, 542.

and city government, with an emphasis on a sustainable and business led urban development[44]. The academic literature on smart city shows interest on this topic in several disciplines (urban studies, environmental studies, sociology) but the field of the study of the law and smart city is just emerging[45], although there are several legal and policy issues that might be addressed: privacy protection[46], security, law enforcement access and insurance[47] among the others. Several observers of the smart city admonish us to reflect over the wider implications of the technological evolution of cities. Antony Townsend, for instance, highlights that the dependence on technology makes cities more functional and equitable, but also exposes them to vulnerabilities[48] related to the dependence on internet, and potential hacker attacks. Brett Frischmann has argued that techno social engineering of humans, largely ignored by legal scholars, might represent one of the greatest constitutional issues caused by the spread of technology, because of its consequences of nudging people to behave like machines and therefore becoming predictable and programmable[49]. The mixture of urbanization with the increasing use of data and technology is in fact turning the city into a civic laboratory[50], and the smart city perspective is providing civic leaders and government with a unique opportunity to reinvent the city in a more open and democratic form through data – led strategies by integrating design and grassroots solutions[51] but at the same time it might face the risk of

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[44] V. Albino, U. Berardi, R.M. Dangelico, *Smart cities: Definitions, dimensions, performance, and initiatives* in 22 J. Urban Technology 1, 3-21 (2015) at 12.

[45] A. Decker, *Smart Law for smart cities, Symposium – Smart law for smart cities: regulation, technology, and future of cities,* 41 Fordham Urb. L. J. 1492 (2015).

[46] K. Finch & O. Tene, *Welcome to the Metropticon: protecting privacy in an hyperconnected town,* 41 Fordham Urb. L. J., 5 (2015).

[47] D.J. Glancy, *Sharing the Road: Smart Transportation Infrastructure,* 41 Fordham Urb. L.J. 1617 (2015).

[48] A. Townsend, *Smart cities. What if the smart cities of the future are chock full of bugs?* Places Journal, (last visited October 2013) https://placesjournal.org/article/smart-cities/.

[49] B. Frischmann, *Thoughts on Techno-Social Engineering of Humans and the Freedom to Be Off (or Free from Such Engineering)*17 Theoretical Inquiries L. 535 (2016).

[50] A. Townsend, *Smart Cities: Big Data, Civic Hackers, and the Quest for a New Utopia,* (2013), 85.

[51] A. Townsend, et. Al., *A Planet of Civic Laboratories: The Future of Cities, Information and Inclusion,* Institute for the Future studies 87 (2011), available at

fueling the conflict in socially and economically stratified cities[52], and deepen social divisions[53]. The concepts of smart city and sharing city sometimes overlap, in public debate and scientific literature or at the public policy level[54]. The sharing city shares some characteristic with the smart city, such as the strong reliance on ICT technologies and data, but has its own peculiar features. For Ageyman and Mc Laren, the distinction is clear: the smart city should be conceived as a mean[55] to reach the sharing city, recovering the original foundation of the city as the sharing space *par excellance*[56]: the market, the *polis*. The technology is still a crucial infrastructure in the sharing city, but it's not conceptualized as merely profit oriented, indeed it can be used for building resilient and strong communities. The vision of the sharing city that is gaining most momentum is the vision of a "crowd-based capitalistic city" that relies heavily on the use of sharing technologies and platforms to exploit the human and material idle capacity that is available in the city as proposed by Arun Sundarajan[57] which provided an interpretation of the sharing economy as a system in which the crowd-based networks replace centralized institutions corporations at the center of capitalism and peer-to-peer exchanges become increasingly prevalent. He has also highlighted that practices such as co-working, car sharing cooperatives, food cooperatives, time banks and others because do not belong to the crowd-based capitalism arena[58]. This kind of practices in fact has a different rationale[59].

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http://www.iftf.org/fileadmin/user_upload/downloads/IFTF_Rockefeller_CivicLaboratoriesMap.pdf.

[52] A. Townsend et. Al., *A Planet of Civic Laboratories: The Future of Cities, Information and Inclusion*, cit. at 51, 11-12.

[53] R. Hollands, *Will the real smart city please stand up?* City, 12, (2008)8 at 314.

[54] See http://www.sharingcities.eu/, or See https://www.transportation.gov/smartcity/infosessions/sharing-economy.

[55] A. Bergren Miller, *Interviewed: "Sharing Cities" Authors Duncan McLaren and Julian Ageyman,* Shareable (March 23, 2016) http://www.shareable.net/blog/interviewed-sharing-cities-authors-duncan-mclaren-and-julian-agyeman.

[56] A. Bergren Miller, *Interviewed: "Sharing Cities" Authors Duncan McLaren and Julian Ageyman,* cit. at 55, 119.

[57] A. Sundararajan, *The Sharing Economy. The End Of Employment And The Rise Of Crowd-Based Capitalism*, (2015).

[58] A. Sundararajan, *The Sharing Economy. The End Of Employment And The Rise Of Crowd-Based Capitalism*, cit. at 57, 19.

The transformative impact of technological sharing economy platform on cities has been addressed by Davidson and Infranca from a legal perspective. The rise of the sharing economy can possibly be understood, for the authors, as a reaction to the current landscape of urban governance[60], where innovative technology regulation is at the national level, although the main impact is at the local level as the controversy between Uber and the City of New York[61] shows.

Among the best known examples of sharing cities regulation, we can observe the case of Seoul[62] that enacted the Ordinance on the Promotion of Sharing and the enforcement Regulation, designated sharing organizations and enterprises, provided a Sharing Promotion Fund and organized sharing schools and communication activities since 2012, and the program is still ongoing. San Francisco is another paradigmatic example of sharing city, one recently leaning towards the Sundararajan approach. It is a highly attractive city for young people because of his high density of shared workspaces and the active role of the Office of Civic Innovation which promotes initiatives such as the Living Innovation Zones and the Entrepreneurship in residence program[63] or experiences like the Open door development group, a real estate investment firm established to buy buildings and convert them into co-living spaces in order to fight against gentrification and support diversity in city neighborhoods[64].

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[59] Anne Davies has explored the transformative impact of the food sharing economy dynamics in cities, that could contribute to food waste reduction, social relations enhancement and innovative business model development. See L. Devaney and A.R. Davies, *Disrupting household food consumption through experimental Home Labs: Outcomes, connections, contexts*, in Journal of Consumer Culture, 1 (2016).

[60] N. Davidson and J.J. Infranca, *The sharing economy as an urban phenomenon,* cit. at 12, 238.

[61] N. Davidson and J.J. Infranca, *The sharing economy as an urban phenomenon,* cit. at 12, 274-277.

[62] The model of the sharing city and the case of Seoul is been analyzed in S. Foster and C. Iaione, *The city as a commons*, 34 Yale l. & Pol'y rev 81 (2016).

[63] Through the entrepreneurship in residence program, startup companies are invited in the city to work with the government for a period in order to co-design solutions to increase efficiency and responsiveness of government, while with the Living Innovation Zones program provides zones where social innovators are provided with opportunities to test their ideas. D. Mc Laren and J. Ageyman, *Sharing Cities* (2015) 21-26.

[64] D. Mc Laren and J. Ageyman *Sharing Cities,* cit. at 63, 23.

2. The emerging of a rights-based approach.

The idea that we are living in an "urban age", and the utopic and optimistic vision of increasing urbanization (and the fact that the urban-rural divide is decreasing) can be challenged[65]. There are at least three levels of complications that can be used as a point of departure for a reflection on a renewed conception of the city or the "urban". The city that the abovementioned authors envision, or advocate for, does not face some of the most critical arguments.

First, thinking about the city today requires an expansive reasoning which considers crossovers between the global level[66] and the national level and the changing form and structure of the city. Brenner and Schmidt have questioned the mainstream idea of the urban[67] and of the urban age, as a chaotic conception[68] that does not seem to align with reality and is based on a theoretical conception of urban and urbanization, divorced from empirical realities. The argument advanced by Foster and Davidson for regionalism to temperate the strong localist tendency of the traditional Tieboutian view of local governance[69] is actually

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[65] The UN Urbanization report shows that more people live in urban areas than in rural areas, from a global standpoint. As the report states "In 2007, for the first time in history, the global urban population exceeded the global rural population, and the world population has remained predominantly urban thereafter". United Nations, Department of Economic and Social Affairs, *Population Division World Urbanization Prospects: The 2014 Revision*, *Highlights 11* (UN Department of Social Affairs 2014).

[66] As Porras observes, cities are becoming active players in international settings: their aspiration to a greater autonomy has been embraced by the international actors that began to choose the, as direct interlocutors. I.M. Porras, *The City And International Law: In Pursuit Of Sustainable Development*, 36 Fordham Urb. L.J. 546 (2008). As the EU integration process accelerated, cities become more involved in EU matters. In particular after the Single European Act (1986) many EU legislation began to directly involve cities. E. Longo & G. Mobilio, *Territorial government reforms at the time of financial crisis: the dawn of metropolitan cities in Italy*, 1 Regional & Federal Studies 13 (2016).

[67] N. Brenner and C. Schmidt, *Toward a new epistemology of the urban?* 19 City 151–182 (2015).

[68] N. Brenner and C. Schmidt, *The Urban age in question,* cit. at 15, 731–55.

[69] The authors make an admonition to local administrator to consider the fact that intern regional competition can bring some risks. S. Foster and N. Davidson, *The mobility case for regionalism*, cit. at 37, 86.

supported by the observation of the regional scale of individual mobility choices[70].

Second, one must also take into account the urban – rural dualism. The urban - rural dualism, one of the theoretical foundations of the urban age thesis, should be reexamined, through the lenses of a new conceptualization of the city to work across boundaries. New visions need to bridge the gap between urban and rural by urbanizing the countryside and ruralizing the urban space, with the aim of achieving a non–conflictual relationship between these two poles. The urban-rural dichotomy seems to have taken the path that Lefebvre predicted[71]. The necessity of ruralizing the city, to make cities greener is strongly related with the urban commons perspective. The countryside is perceived from the birth of the modern city as the place where people can escape from the urban pressure and urban routine, still perceived today as a *status symbol,* in particular with the increasing lack of green spaces, pollution and congestion of cities, and the crisis of the urban commons[72] that makes urban life harder than ever and is a source of exclusion for low income people and vulnerable groups. The necessity of greening the city, ruralizing the city, seems to be an urgency to guarantee a minimum degree of quality of urban life and to maintain the contact between human and nature in the city. On the other hand, there needs to be a re-examination of urbanization of the rural to bridge the urban-rural divide in a non-conflictual way, as highlighted above in this paragraph. The urbanization of the rural is translated into the uncontrolled transformation of the country in sprawled suburbs[73], followed a consumerist approach[74], and created the issue of the

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[70] The authors examine the role of Regions in regional mobility choices and argue that what attract residents and actually drive the inter-regional mobility is attractiveness of the regions, not the single municipality nor county. Locational choices are therefore based in part on a regional-scale evaluation that considers human capital, job and investment opportunity, among the other factors. S. Foster and N. Davidson, *The mobility case for regionalism*, cit. at 37, 81-100.

[71] D. Harvey, *Rebel cities*, (2012).

[72] See generally C. Iaione, *City as a commons,* Paper presented at the IASC thematic conference "Design and Dynamics of Institutions for Collective Action: A Tribute to Prof. Elinor Ostrom", 29 November - 1 December 2012, available at the Digital Library of the Commons.

[73] D. Harvey, *Rebel Cities,* cit. at 71, 158.

[74] D. Harvey, *Rebel Cities* cit. at 71 158.

inner areas while it might be turned into a different process through a smart rural approach[75] that brings social and technological innovation in the rural context to improve and facilitate agriculture and everyday life in the country, and promote storytelling and communication strategies to enhance sustainable tourism.

Finally, a third complication emerges that cities are at the same time places of opportunities and collaboration but also risks and conflicts. Rights and powers of citizens should be recognized. In his seminal work on the global city and expulsions, Saskia Sassen has raised a crucial issue of growing inequalities and impoverishment of the urban middle class in big cities[76]. Hardt and Negri identify a transition from an industrial to a biopolitical metropolis, conceived as a "reservoir of the common"[77], where the struggle, subordination and suffering path of what they call the multitude poses the positive and negative conditions for it's future. For Hardt and Negri, "the metropolis is to the multitude what the factory was to the industrial working class"[78], and this multitude is constituted by a "whatever singularity"[79]and is comparable to a multiplicity of singularities acting as a crowd[80].

What we try to argue here is that a reasoning centered on rights is required for overcoming the elements of complications briefly described above and explore limitations of current approaches to the city. Clearly the lines are blurred, and this essay is not representative of the high degree of diversity, and further reflections are required in order to build a urban visions' precise matrix. The above mentioned urban visions represent a broad description of the wide and diverse range of arguments discussed in the disciplines that address urban issues, but none of them provide a rights-based argument, if not partially.

But what does it mean to implement a rights-based city? The integration of the protection of human rights in the

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[75] See the work of the Rural Hub on Rural social innovation, Italy, available at http://www.ruralhub.it/it/.

[76] See S. Sassen, *The global city: New York, London, Tokyo*, (1991) and *Expulsions. Brutality and Complexity in the Global Economy*, (2014).

[77] M Hardt and A. Negri, *Commonwealth,* (2009), 156.

[78] M. Hardt and A. Negri, *Commonwealth,* cit. at 77, 250.

[79] See generally G. Agamben, *The coming community,* (2007).

[80] M. R. Marella, *The constituent assembly of the commons,* Open Democracy (last visited October 28 2014) https://www.opendemocracy.net/can-europe-make-it/maria-rosaria-marella/constituent-assembly-of-commons-cac.

international law and issues on the commons, in relation to climate change[81], nature/environment and culture[82] is a great research challenge.

At the EU level, the Pact of Amsterdam, the Urban Agenda for the EU, considers among his priorities inclusion of migrants and refugees, urban poverty, housing, urban mobility and sustainable use of land.

The idea that a human rights based approach to cities can offer a better urban future has been addressed by the United Nations too: the vision behind the UN Habitat New Urban Agenda is that of a sustainable urban development, that aims at ending poverty, achieving a sustainable and inclusive urban prosperity. Paragraph 12 of the section "Our shared vision" states that "the aim should be to achieve cities and human settlements where all persons are able to enjoy equal rights and opportunities, as well as their fundamental freedoms, guided by the purposes and principles of the Charter of the United Nations, including full respect for international law. In this regard, the New Urban Agenda is grounded in the Universal Declaration of Human Rights, international human rights treaties, the Millennium Declaration, and the 2005 World Summit Outcome. It is informed by other instruments such as the Declaration on the Right to Development"[83].

The New Urban agenda envisions cities where the full realization of the right to adequate housing (as a component of the right to an adequate living), universal access to safe and affordable drinking water and sanitation, equal access for all to public goods and quality services in areas such as food security and nutrition, health, education, infrastructure, mobility and transportation, energy, air quality, and livelihoods" are promoted, cities that are participatory, engender a sense of belonging and ownership among all their inhabitants, and are committed "to promote equitable and affordable access to sustainable basic physical and

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[81] S. Foster and P. Galizzi, *Human Rights and Climate Change: Building Synergies for a Common Future* in The Climate Law Encyclopedia (Daniel Farber and Marjan Peeters, eds. 2016).

[82] F. Lenzerini and A. F. Vrdoljak, *International law for common goods. Normative perspectives on human rights, culture and nature,* Oxford: Hart Publishing, Studies in international law, 50, (2014).

[83] Paragraph 12, section "Our shared vision", Habitat III, *New Urban Agenda,* Draft outcome document for adoption in Quito, October 2016 available at https://www2.habitat3.org (last visited October 28 2016).

social infrastructure for all, without discrimination, including affordable serviced land, housing, modern and renewable energy, safe drinking water and sanitation, safe, nutritious and adequate food, waste disposal, sustainable mobility, healthcare and family planning, education, culture, and information and communication technologies"[84]. The activity of the Global Platform for the Right to the city, that aims at contributing to the adoption of policies action and project aimed at developing fair cities, democratic, sustainable and inclusive by United Nations bodies and the national and local governments[85], has been crucial for the development of the concept of the right to the city in the UN Habitat New Urban Agenda[86]. The concept of the right to the city is outlined in paragraph 11 of the section "Our shared vision":

> We share a vision of cities for all, referring to the equal use and enjoyment of cities and human settlements, seeking to promote inclusivity and ensure that all inhabitants, of present and future generations, without discrimination of any kind, can inhabit and produce just, safe, healthy, accessible, affordable, resilient, and sustainable cities and human settlements, to foster prosperity and quality of life for all. We note the efforts of some national and local governments to enshrine this vision, referred to as right to the city, in their legislations, political declarations and charters.[87]

Two approaches seem to emerge as deeply rooted in the idea of a rights-based vision of the city: the "rebel cities" which prefer a conflict-based approach and the "collaborative cities"

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[84] Paragraph 4, section "The transformative commitment for the sustainable urban development". Habitat III, *New Urban Agenda*, Draft outcome document for adoption in Quito, October 2016 available at https://www2.habitat3.org (last visited October 28, 2016).

[85] Information about the Global platform for the Right to the city are available at http://www.righttothecityplatform.org.br/.

[86] *Urban Agenda for the EU*, Pact of Amsterdam, Agreed at the Informal Meeting of EU Ministers Responsible for Urban Matters on 30 May 2016 in Amsterdam. (last visited October 28, 2016), available at http://urbanagendaforthe.eu/pactofamsterdam/.

[87] Habitat III, *New Urban Agenda,* Draft outcome document for adoption in Quito, October 2016. (last visited 28 October 2016) https://www2.habitat3.org/bitcache/97ced11dcecef85d41f74043195e5472836f6291?vid=588897&disposition=inline&op=view.

which advance a governance-based vision. They of course overlap in few instances and complement each other because they are both inspired by the commons to some degree to construe a rights-based vision of city.

2.1 The rebel city

The idea of the right to the city, first advanced by Lefebvre[88], emphasizes the active role of urban inhabitants in the struggle against the threats represented by the strong neoliberal character of international capitalism that impact on the quality of urban[89]. Rebel cities[90] are those cities where there is an active resistance to the process of capitalist urbanization[91]. Harvey has highlighted that the anti-capitalist struggles of urban revolutionary movements in the rebel cities, like it happened in London in 2011 or in the Occupy Wall Street Movement[92], are struggles to reclaim a collective right to the city. Episodes of urban riots and urban conflict have deep and multidimensional causes, but we can certainly assume that inequalities in income distribution and job opportunities in the cities might profoundly affect a city and create a fracture that is hard to repair.

Technology innovations are also exacerbating such phenomena. For instance, in countries like France[93], Belgium[94],

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[88] H. Lefebvre, *The Urban Revolution,* translated by Robert Bonnono, (1970). See also H. Lefebvre, *The Right to City*, Writings on Cities 147 (Elenore Kofman & Elizabeth Lebas eds., trans., 1968)

[89] D. Harvey, *The right to the city,* New Left Review 53, (September-October 2008), https://newleftreview.org/II/53/david-harvey-the-right-to-the-city) and D. Harvey, *The Right to the City*, 27 Int'l J. Urb. &Reg'l Res. 939 (Susan Clark & Gary Galle eds., 2003); See also E. W. Soja, *Seeking Spatial Justice* (2010); M. Purcell, *Excavating Lefebvre: The Right to the City and its Urban Politics of the Inhabitant*, 58 GEOJ. 99 (2002). *See also* World Urban Forum, *World Charter on Right to the City* (2004), available at http:// abahlali.org/files/WorldCharterontheRighttotheCity-October04.doc

[https://perma.cc/3G8R-QQ8C]; European Council of Town Planners, *The New Charter Of Athens* (2003), http://www.ceu-ectp.eu/images/stories/download/charter2003.pdf.

[90] D. Harvey, *The Right to the City*, cit. at 89.

[91] D. Harvey, *Rebel Cities*, cit. at 71, 80.

[92] D. Harvey, *Rebel Cities* cit. at 71, 155 and 159.

[93] After the protest of taxi drivers – that eventually became violent- against the new app launched by Uber, Uper POP, French drivers of app companies like Uber and Chauffeurs Privées organized a counter protest in February. See M. Slater-Robins and B. Tasch *French taxi drivers shut down Paris as protests over Uber turn violent*, Business Insider UK, (January 2016)

Latin America and Costa Rica[95] and recently in Nairobi[96], sharing economy platforms like Uber are triggering the protests of taxi drivers. The same could happen for other categories of workers whose job will be disrupted by technological advancements if regulatory and/or policy action is not taken.

In the EU context, it is currently possible to observe the rise of radical democratic innovations at the political level. Social movements have started to propose a "rebel city" approach.

In Rome for instance collectives have started a drafting exercise to get to a "Charter of Common Rome" identifying ten fundamental principles: 1) the inalienability of State-owned assets; 2) the introduction of the right to the "common use" of such assets; 3) the distinction between legality and legitimacy in order to filter cases that are grounded in urban informal, social and solidarity practices; 4) the direct reference to the constitutional principles that can protect this approach such as Articles 2, 4, 42, 43, 45 and 118 of the Italian Constitution; 5) the recognition that law can be produced by society; 6) the recognition of the right to autonomy as a right to self-organize and self-regulate but with the possibility to keep the door open to the relations with others; 7) the need for a different bureaucratic approach towards experiences of self-management and solidarity that should be considered as social institutions; 8) the recognition of the urban commons (social spaces, virtuous associations, cultural centers,

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http://uk.businessinsider.com/uber-protests-in-paris-2016-1. And B. Pedersen, *After taxis, French Uber drivers launch their own protest*, France 24, May 2 201) http://www.france24.com/en/20160202-after-taxis-french-uber-drivers-plan-own-protest.

[94] See: http://www.reuters.com/article/us-uber-tech-belgium-idUSKCN0RG1XB20150916.

[95] Latin America is also the fastest development region for Uber, with Mexico on the top. See A. Willis, *Uber's fastest growing Region set for new no.1 Break-Even*, Bloomberg technology (May 30, 2006, 8 PM edt) http://www.bloomberg.com/news/articles/2016-05-31/uber-s-fastest-growing-region-set-to-break-even-fund-expansion. See also https://www.euractiv.com/section/transport/news/latin-america-europe-cab-drivers-team-up-against-uber/. See also C. Woody, *Latin America, Europe cab drivers tema against Uber* (last visited October 20 2016). http://uk.businessinsider.com/anti-uber-protests-in-costa-rica-and-latin-america-2016-8?r=US&IR=T.

[96] See BBC Africa, *Kenya investigates "barbaric" Uber attacks in Nairobi*, BBC NEWS (last visited October 20 2016) http://www.bbc.com/news/world-africa-35476405.

industrial reconverted assets and new forms of cooperative work) through a specific regulatory tool; 9) the recognition of the urban commons as functional to fundamental rights according to the findings of the Rodotà commission; 10) the recognition of the right to co-manage the urban commons and participate in decision-making processes related to them.

In cities like Naples or Barcelona, that declare themselves moving in the direction of dramatic change, in line with the right to the city tenets, this radical approach to the urban commons and the realization of the rebel city model has been transformed into a policy action.

The City of Barcelona is promoting a radical approach to the urban commons. The current government of the City of Barcelona, elected in 2015, is expressed by the civic platform Barcelona en Comù. Mayor Ada Colau has devised a bold policy innovation plan inspired by the governance of the commons. The range of recent policies promoted by the current city government of Barcelona that might represent a good example for a radical commons oriented approach to the city governance is very wide and addressed issues related to housing, urban mobility, energetic sovereignty, social and solidarity economy, digital democracy.

We will focus here on a brief overview on the most relevant policies for the outline of the rebel city model, regarding participation, right to housing, social and solidarity economy and social public procurement. With the "Pla d'Actuació Municipal 2016-2019" (PAM)[97] the new government claimed that the goals of their administration would be social justice, sustainable economic and social development, and to reverse dynamics of polarization and inequality. Nevertheless, this document has not been approved by the *Plenari del Consell de Ciutat (the Full City Council)*[98]. With these guidelines, the city launched the first plans focusing on housing, energetic and digital sovereignty, mobility and citizen participation. One of the areas of the City

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[97] See City of Barcelona, *Pla d'actuació municipal 2016-2019* (Program for Municipal Implementation 2016-2019. Full version of the plan is available here: http://governobert.bcn.cat/estrategiaifinances/ca/programa-dactuaci%C3%B3-municipal-pam-2016-2019bp.

[98] The Full City Council is the highest advisory body and participation of the City Council, where the representatives of the City Council and citizens discussed the main issues of the city with the constant pursuit of commitment and responsibility. http://www.conselldeciutat.cat/ca/page.asp?id=2

Administration that has recently created and whose goals are precisely to promote involvement of citizens in the city government is the Active Democracy Area. The area promoted a participatory process to issue the *Regulation for Citizen Participation*[99], currently (June 2017) under public consultation. Some articles are dedicated to the urban commons and the civic use and management of them. Article 109 establishes that the institutions, foundations, civic organizations and nonprofit associations can exercise municipal powers, or participate on behalf of the City in the management of services or facilities whose ownership corresponds to other public administrations. These organizations can contribute through their activities and projects to the exercise of municipal powers. They can also assist in the management of services and facilities owned by other public administrations.

Among the most pressing issues that the city of Barcelona addressed with an emphasis is the housing emergency. The city promoted a radical strategy to cope with the housing issue, also thanks to the support of a Regional Law. The *"Barcelona's Housing Right Plan (2016 - 2025)"*[100] aims to ensure the housing' social function and achieve a high quality public service. The highlights of this plan are on one hand the *co-housing program*[101], a new

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[99] The Regulation for Citizen Participation was co-created with Barcelona citizens through the platform "Decidim.Barcelona". The initial text was then approved in a Municipal Council commission and subject to participatory public consultation on the city digital participatory platform. The text of the Regulation and the information on the process are available here: https://www.decidim.barcelona/processes/5?locale=es.

[100] City of Barcelona, *Pla per dret a l'habitadge 2016-2015, Plan for the right to housing of the City of Barcelona*, 2016 – 2025, approved at by the Full City Council on January 27, 2017. The plan is available at http://habitatge.barcelona/sites/default/files/documents/pla_pel_dret_a_lha bitatge_resum_executiu.pdf. The plan is based on a previous regional law about the right to the housing, the Law 18/2007, December the 28th, on the right to housing published in the «*Diario Oficial de la Generalitat de Cataluña*», DOGT n.o 5044, on January 9 2008. The functioning of the *Borsa d'habitatge de Lloguer* and the role of the city as a mediator is regulated by the Decree 75/2014, of May the 27 of the Plan for the Right to Housing and by the Cataluña Law Nº 24/2015, on *De medidas urgentes para afrontar la emergencia en el ámbito de la vivienda y la pobreza energética,* Urgent measures to address the housing and energy poverty emergency. Approved on 29 July and published in DOGC no. 6928, August 5, 2015.

[101] See information on the co-housing policy and the public contest here: http://habitatge.barcelona/ca/acces-a-habitatge/cohabitatge.

model that gives communities the "right of use" on buildings or brownfields for long periods and, on the other hand, it provides measures to enhance the growth of the public housing stock.

The city implemented a system of economic incentives and disincentives addressing private property in order to promote social housing.

The first pillar is the mediation into the rent market. The municipality acts as a mediator between the owners of empty apartments in the city and people that need lodging. The city offers to the owner: a) subventions to the inclusion in the "Rent Housing Stock" to houses (1.500 € if the house is empty, and until 6.000 € to cancel debts to cases in legal processes); b) subventions to rehabilitate the house (100% of the expenses up to 15.000 euro for a 5 years' minimum contract); c) subventions to pay local taxes (IBI); d) multi-risk insurance during the contract period; e) follow up of contract obligations and free legal and technical advice f) guarantee of support for rent unpaid (until 6 months since the contract starts). The city also provides guarantees for the renter: a) social rent price (Social Rent); b) mediation in the drafting of the rent contract c) legal and technical advice; c) the amount of the contract expenses and the first rent month[102].

The second pillar of this policy is the empty houses program. It is estimated that Barcelona has between 4% to 11% of empty houses in the whole city. This means that between 31.202 and 88.259 housing units are empty in Barcelona[103], against a total amount of 6.300[104] social rent apartments. For that reason, the city has a process of research for a deep understanding about the empty houses situation, creation of mechanisms to stimulate the

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[102] See *Modificació Normes Reguladores de la borsa d'habitatge de lloguer de Barcelona* 2014, Modification of the Regulatory Norms of the Rental Housing Exchange, approved by *the Junta General del Consorci de l'Habitatge de Barcelona,* on July 1st, 2014, available at http://www.bcn.cat/consorcihabitatge/ca/borsa-habitatge.html. Starting in 2009, the Rental Housing Exchange is part of the powers of the Barcelona Housing Consortium and is managed through the Housing Offices Network and the Direction of Assistance for Rent And the housing stock of the City of Barcelona. It offers mediation services between owners of empty houses and potential tenants, and aims to increase the number of rental housing at affordable prices and facilitate access to coexistence units and youth between 18 and 35 years of age.

[103] City of Barcelona, *Pla per dret a l'habitadge 2016-2015,* Plan of the right to housing 2016-2025, cit. at 100, 20.

[104] Data on the housing public stock are available here: http://habitatge.barcelona/ca/acces-a-habitatge/parc-public-habitatges.

reactivation of these empty houses detected and the implementation of mechanisms to sanction that will complement the activation measures[105]. To address this problem and therefore fight against speculation on rent, the city provides a series of actions. Though the *"Unit Against the Housing Exclusion"*[106], the city is systematizing the information, checking the houses that remain empty and applies sanctions. For owners that have an empty house for more than 6 months an amount of 600€ is charged for the inspection and legal expenses and a 200€ more with every new infringement. The application of this measure particularly hits big owners such as the banking groups who owns 2.592 empty accommodations registered in the city[107]. The budget for the housing plan, approved by the *Plenari del Ajuntament* (i.e. the plenary session of the City Council of Barcelona)[108], is 3.5 billion euros[109]. The City of Barcelona is the major contributor but this policy foresees the support from other private and public actors.

Also, the *Generalitat of Cataluña* contributes to the "Housing Consortium of Barcelona". The Housing Consortium is a public body, with the purpose of which is to undertake functions and activities and provide services related to affordable housing in Barcelona. This body is comprised of Barcelona City Council and the Generalitat de Catalonia. The Consortium has its own legal status, separate from that of its members, granted through the Municipal Charter of Barcelona, and it has full capacity to act in order to achieve its aims. It also has a public participatory body called the Barcelona Social Housing Council[110].

The plan also aims at promoting co-housing through the legal category of the "right to use" as opposed to ownership. At

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[105] City of Barcelona, *Pla per dret a l'habitadge 2016-2015,* Plan of the right to housing 2016-2025, cit. at 100, Section 5.2., 49.

[106] City of Barcelona, *Pla per dret a l'habitadge 2016-2015,* Plan of the right to housing 2016-2025, cit. at 100, Section 5.2., *50.*

[107] Data about the empty houses stock in Barcelona available here: http://habitatge.barcelona/ca/habitatge-un-dret-com-una-casa.

[108] City of Barcelona, *Pla per dret a l'habitadge 2016-2015,* Plan of the right to housing 2016-2025, cit. at 100.

[109] City of Barcelona, *Pla per dret a l'habitadge 2016-2015,* Plan of the right to housing 2016-2025, cit. at 100, 9.

[110] *Estatuts del consorci de l'habitatge de Barcelona*, Bylaws of the Barcelona housing consortium, approved in Barcelona on August the 31 2009 and published in the PBOPB N.o 211/3A3, on September 3, 2009.

the beginning of 2017, the City of Barcelona has assigned five urban spaces to cooperatives thought a public contest[111] to cooperatives that promote co-housing initiatives.

Together with the housing emergency, the energetic poverty was taken into consideration. The plan to achieve the energetic sovereignty (2016-2019)[112] was launched by the City of Barcelona to launch the process of transition of the city toward municipal energetic sovereignty[113]. The aim of the plan is to increase local production of electricity from renewable sources and decrease the city's energy consumption. Citizen's participation to the energy transition will be fueled through a double path. On the one hand, the reception of energy policies' proposals from organized civil society will be coordinated, starting with the creation of a Working Group on Energy and Climate Change, within the Citizenship for Sustainability Council. Also, individual and private sector participation will be stimulated. On the other hand, the direct participation of the citizens in the decision-making processes of the processes and related to the energy will be enhanced[114].

The most relevant lines of action of this policy in light of this study is the creation of a public company for energy supply, that buys energy from public and private renewable sources, called *Barcelona Energía*[115]. For its functioning, the City is studying

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[111] See information on the co housing policy and the public contest here: http://habitatge.barcelona/ca/acces-a-habitatge/cohabitatge.

[112] City of Barcelona, *Mesura de govern: Transició cap a la Sobirania energètica,* Government Measure: transition toward the Energetic Sovereignty. Approved in July 2016, available at http://ajuntament.barcelona.cat/ecologiaurbana/sites/default/files/MesuraGovern_TransicioSobiraniaEnergetica.pdf

[113] The energetic plan is based on the Cataluña Regional Law N° 24/2015, July, 29th on *De medidas urgentes para afrontar la emergencia en el ámbito de la vivienda y la pobreza energética,* urgent measures to address the housing emergency and the energetic poverty, in which the law provisions on the fight against energetic poverty were not suspended by the Constitutional Court of Spain. See Constitutional Court of Spain N° 2501-2016 (May, 24, 2016). The Constitutional Court admitted the questions posed by the Government for suspending the implementation of the law provisions related to the housing available at https://www.boe.es/boe/dias/2016/06/03/pdfs/BOE-A-2016-5337.pdf.

[114] *Mesura de govern: Transició cap a la Sobirania energètica,* Government Measure: transition toward the Energetic Sovereignty, cit. at 112, 13.

[115] T. Sust, *El ayuntamiento crea Barcelona Energia para autoabastecerse de electricidad*, The City of Barcelona creates Barcelona Enrgìs for electricity self-provision, El Periodico, (March 31, 2017), available at

different management schemes. Pursuant to these new schemes the City and citizens would establish cooperative solutions that might allow them to rent spaces, and realize other activities in order to double the power generation capacity of the City. These schemes are aimed at producing an increase of 10% in the power generation through citizen's self-production of energy[116]. Renewable energy infrastructures will be placed on both city-owned and private buildings. To this end, the city intends to promote a call for interest to place renewable energy infrastructures in private buildings and to sign collaboration agreements between the public administration and the property owners, to buy energy produced by the infrastructures in private buildings' or just rent and maintain the roofs and the renewable energy infrastructures[117]. The City will also offer tax incentives and bonuses for the voluntary incorporation of renewable energy generation facilities in private buildings or for the rehabilitation of existing facilities[118]. A "Barcelona City Laboratory" will be established for developing a shared methodology and disseminate models of renewable energy self-production that can be replicated. The goal is to increase the production of energy from photovoltaic infrastructures installed in private buildings increasing the energy production of 10%, and doubling the energy produced in municipal facilities and public spaces reaching the level of 400 kWp in buildings and 65 kWp in public spaces[119].

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http://www.elperiodico.com/es/noticias/barcelona/ayuntamiento-crea-barcelona-energia-para-autoabastecerse-electricidad-5938853. See also Europa Press, *El Ayuntamiento aprueba crear su eléctrica Barcelona Energia para ganar "soberanía energética",* The City of Barcelona approves the creation of Barcelona Enrgìa for achieving energetic sovereignty, available at http://www.elmundo.es/cataluna/2017/03/31/58de3ba8e5fdeac2478b4582.ht ml (last visited March 31, 2017).

[116] City of Barcelona, *Mesura de govern: Transicio᷈ cap a la Sobirania energètica,* Government Measure: transition toward the Energetic Sovereignty cit. at 112, 23.

[117] *Mesura de govern: Transicio᷈ cap a la Sobirania energètica,* Government Measure: transition toward the Energetic Sovereignty, cit. at 112, 14.

[118] City of Barcelona, *Mesura de govern: Transicio᷈ cap a la Sobirania energètica,* Government Measure: transition toward the Energetic Sovereignty, cit. at 112, 21.

[119] City of Barcelona, *Mesura de govern: Transicio᷈ cap a la Sobirania energètica,* Government Measure: transition toward the Energetic Sovereignty, cit. at 112, 23.

Regarding the economic development, the City presented the *"Social and Solidary Economy Promotion Plan 2016-2019"*[120], coordinated by the new Commission of Cooperative Economics, Social and Consumption and Solidarity[121] with different agents, companies, second level organizations, networks, federations active in the field. This plan was established after meetings with representatives of several sectors[122] such as the *"Commons Collaborative Economies: Policies, Technologies and City for the People"* which aimed to highlight the relevance of the commons-oriented approach of peer production and collaborative economy, while proposing public policies and providing technical guidelines to build software platforms for collaborative communities[123]. It also created a system of open and expandable platforms for boosting dialogue on the topic[124] with policy advisors such as the "Commons Collaborative Economies: Policies, Technologies and City for the People", promoted by the Department of Alternative Economies and Proximity of Barcelona Activa and BarCola[125] (node on collaborative economy and commons production in Barcelona that coordinate eighteen realities of collaborative economy active in the city), as well as research groups such as Dimmons (Digital Commons Research at the Internet Interdisciplinary Institute (IN3) group of the Open University of Catalonia, and the Institute of Govern and Public Policies of the Autonomous University of Barcelona (IGOP)[126]. The public

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[120] City of Barcelona, *Pla d'impuls de l'economia social I solidària, 2016-2019,* Promotion of social and solidary economy Plan 2016-2019, available at http://eldigital.barcelona.cat.

[121] This new governmental office was created with the government of *Barcelona en Comù*. Avaiable online here: http://ajuntament.barcelona.cat/treballieconomia/es/inicio.

[122] City of Barcelona, *Pla d'impuls de l'economia social I solidària, 2016-2019,* Promotion of social and solidary economy Plan 2016-2019, cit. at 112, 12.

[123] The Procomù is provided in the City of Barcelona, *Pla d'impuls de l'economia social I solidària, 2016-2019,* Promotion of social and solidary economy Plan 2016-2019, cit. at 112.

[124] See the analysis of the action of the Barcelona city council to support the commons and the collaborations with commoners provided by David Bollier, *Barcelona's Brave Struggle to Advance the Commons*, D. Bollier, *News and perspective on the commons,* David Bollier (Nov. 22 2016), available at http://www.bollier.org/blog/barcelonas-brave-struggle-advance-commons.

[125] See the description of the *Barcola* available at https://wiki.p2pfoundation.net/BarCola.

[126] See the descritption of the IGOP Center here: http://igop.uab.cat/.

procurement is an issue that many Spanish cities (Barcelona, Madrid, Sevilla, Valencia, Pamplona, Sabadell y Santa Coloma de Gramenet) addressed through the sign of a "Municipal Declaration in favor of a Sustainable Public Procurement[127]". Starting from a general acknowledgement of the high degree of corruption in public procurement, the declaration claims for a more transparent, social and environmental friendly public procurement, express concerns for the draft of the law on public procurement that is not able to guarantee a responsible, efficient, transparent and sustainable public procurement and provide some measures: 1) provide a standardized set of guidelines guarantee an equal access to the public procurement to all enterprises, including SMES 2) enlarge the material object applicable for the appeal to the administrative tribunal 3) A regulation of local public services that ensures that their provision is territorial – based and accessible. 4) the concept of "most economic advantageous offer" must include environmental, social, ethical, labor parameters and must ensure gender equality. 5) simplify procedures behind public procurement. 6) establish a Regional Courts Commission that solve conflicts between businesses and ensure concurrence 7) regulate the e-procurement 8) account for the peculiarities of cities and their differences. 9) account for and regulate the peculiarities of social services 10) enhance public participation in procurement 11) establish mechanism that facilitate participation of social enterprises to the procurement process 12) regulate the relationship between public administrations and the agencies that provide for the labor and environmental inspection 13) issue norms that prohibit to the public administration to contract businesses that have headquarters in fiscal paradises. For the implementation of the Declaration, the city of Barcelona issued the *Municipal Social Procurement Guide*[128], recently supported by a Mayoral Decree[129].

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[127] *Declaracion Municipalista en favor de una contrataciòn pùblica sostenible,* Municipal Declaration in favor of a Sustainable Public Procurement, signed by the Mayors of Barcelona, Madrid, Valencia, Sta. Colomna de Gratement and Sebadell on March 2, 2017, in Barcelona, available at http://ajuntament.barcelona.cat/premsa/wp-content/uploads/2017/03/DeclContractacio.pdf.

[128] City of Barcelona, *Guìa de contrataciòn pùblica social*, Guide for Social Public Procurement, (Depósito legal: B.22.295, 2016), available at http://ajuntament.barcelona.cat/contractaciopublica/pdf/guia-contractacion-publica.pdf

The Barcelona City Council promotes socially responsible public procurement by incorporating in the municipal public procurement objectives of social justice, environmental sustainability and ethical code. One of the main goals of this measure is to incentive the subcontracting to Social Economy Enterprises of Barcelona with a business model including social responsibility, in the public procurement. For guarantee social efficiency of public investment, the guide includes the possibility of incorporating specialized companies that provide efficient technical innovation and social value can be set as a condition of the contract execution outsourcing part or specific parts of the object of the contract[130].

Assuming that the model of the Rebel city also includes occupation of public or private spaces, then the case of Naples might offer a good observation point. The City of the Naples is promoting an innovative approach to the governance of the urban commons and of the public services[131]. Since 2011, under the Mayorship of Luigi De Magistris, the city introduced innovative regulatory innovations for the urban commons, through City Government and City Council resolutions. The City approved a resolution[132] that, in accordance and as an enactment of a previous resolution[133] (that provided guidelines for under-utilized public buildings, perceived from the community as commons and

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[129] *Decret D'alcaldia S1/D/2017-1271, de contractació pública sostenible de l'Ajuntament de Barcelona* Mayoral decree on social public procurement of the City of Barcelona approved on Apr. 24, 2017 and published in the GMAB on April 28, 2017, available at http://ajuntament.barcelona.cat/contractaciopublica/pdf/Decreto_Contrataci on_Publica_Sostenible.pdf.

[130] *Decret D'alcaldia S1/D/2017-1271, de contractació pública sostenible de l'Ajuntament de Barcelona* Mayoral decree on social public procurement of the City of Barcelona, cit. at 126.

[131] For an analysis of the legal principles of the Italian Constitutional and Normative framework on which an innovative management schemes for the commons and the local public services might be based, see A. Lucarelli, *Note minime per una teoria giuridica dei beni comuni*, 12 Espaço Jurídico, 11-20 (2011).

[132] City of Naples, Resolution of City Government n. 446, Implementation of the Deliberation of the City Council, n. 7 2015. Identification of spaces of civic relevance to be considered as commons, approved on June 1, 2016.

[133] City of Naples, Resolution of City Council n. 7, Guidelines for the identification and management of goods belonging to the City Heritage, underutilized or partially utilized, perceived by the community as commons and potentially subject to collective use, Approved on March 9, 2015.

consequently potentially subject to collective fruition) recognizes seven buildings – currently occupied - as commons that are perceived from citizenship as civic environment. The resolution prescribe that the city ensures the enactment of the following steps: approval of internal regulations of civic use or other forms of civic self-organization that will be recognized in collective conventions; identification of sustainability strategies; creation of the requisites for an effective dialogue with public administration; ensure security in the spaces[134]. Through a deliberation issued few months later the same year[135] addressing specifically the Asilo Filangieri experience, the city is committed to ensure the open use of the buildings, according to the following key criteria:

> 1) the *uti cives use* (the use is open for everyone that pass through that territory and to the collectivity as a whole).
> 2) Functioning according to participatory democracy use
> 3) Pursuing of the goal of diffuse culture according to publicness and inclusiveness
> 4) Cultural, financial and intergenerational sustainability.

The City administration recognizes the high social and economic value created through the direct participation of citizens in the functionalization of the underutilized buildings. The positive externalities generated by the collective use impact the neighborhood and the whole city: the administration therefore collaborates to the management charges and to everything needed to guarantee accessibility and protection of the building. The city also recognizes the power of generation of a system of self-regulation, the "*potere autonòmico*" contained in the Declaration of Civic and Collective Uses drafted by the community of the Ex Asilo Filangieri that is the product of two years of collective use of the structure *uti cives* and thanks to the close collaboration and support of the administration. The City therefore adopts the

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[134] The complete text of the Declaration of civic use of Asilo Filangieri is available at http://www.exasilofilangieri.it/regolamento-duso-civico/.

[135] City of Naples, Resolution of City Government n. 893, Identification of the San Gregorio Armeno Complex as a space for civic and collective use, approved in December the 27th 2015.

Declaration of Civic Uses[136] drafted by the "ex-Asilo Filangieri" experience as an institutionalized system of rules for self-governance of the commons, transferable to similar experiences. The regulation states general principles and rules for a public good that is governed directly by the community itself through an "assembly of management" that evaluates the different proposals and coordinate the use of the space, that is limited to cultural and general interest activities. Civic uses, as stated by the Italian legal scholar Ugo Petronio[137], are provided by the Italian Law n. 1766, June the 16th 1927, from the King decree n. 332 of February the 26th 1928, from the law n. l078 of July the 10th, 1930, that contain norms on the resolution of conflicts over civic uses. For Flore Siniscalchi and Tamaburrino, civic uses are "the rights that belongs to a collectivity, organized into a public legal person or not, that concur to the creation of the constitutive element of a City or an other legal public person, and to the single citizens that are part of it, that consist in the right to extract some elementary units form lands, forests, waters of a territory (…) the content of the civic use is the use from the general collectivity and not a single or a group of singles"[138]. Giuseppe Micciarelli, theory of the law scholar and activist of the Ex Asilo Filangieri states that civic uses are the legal form that best inspired the draft of a regulation of collective use for the Asilo[139] because they are legal tools build upon a communitarian feature[140]. On one side, the strategy consisted in the drafting of a declaration of use, written by the community of the Asilo, though public tables and a constant confrontation with the practices of use generated in the reality. On the other side, the city deliberation written together by the community of the Asilo and the city administration, that adopt the declaration of use as a system of norm for the use of the space. The experience of the Filangieri represent an example of the recognition by the city of the capacity of a community to define a system of norms that are not limited to the regulation of the access

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[136] The complete text of the Declaration of civic use of Asilo Filangieri is available at http://www.exasilofilangieri.it/regolamento-duso-civico/.

[137] U. Petronio, *Usi civici* [XLV, 1992], in Enc. Giur. Giuffrè, (1992).

[138] G. Flore, A. Siniscalchi E G. Tamburrino, *Rassegna di giurisprudenza sugli usi civici* (1956).

[139] See G. Micciarelli, *Introduzione all'uso civico e collettivo urbano*, (forthcoming, Munus 1, 2017).

[140] G. Micciarelli, *Introduzione all'uso civico e collettivo urbano*, cit. at 132.

but also of the management of the resource, the everyday management but also the complex management such as: provision of crucial assets, participation to public call for project to raise funds and other decisions. The civic uses regulation avoids the necessity of opening a dialogue with the administration to accomplish each of this task and that the administration is not the sole responsible for every legal relation structured. This represents both a guarantee for the administration against an excessive charge of work and a warranty of the protection of their autonomy of the community. The declaration of civic uses is a form of non-exclusive use of public spaces that envision a new role of citizens as institutions. Civic uses represent a reflective tool also for the administration, that is pushed to act not as a mediator, but more as an enabler of the capacity of the community to act as an institution[141].

2.2. The co-city

Looking back at the city of yesterday might be a lever for a comprehensive understanding of the city of today. The urban paradigms discussed in the previous paragraphs are helping us to envisage the city of tomorrow, but they are not concerned about the city of yesterday or the city of today. Khanna has suggested to look back to the middle age cities in order to understand the world of today, because it was an age where cities were a very powerful from both a political and economic perspective[142]. The cities of today won't obey to the traditional rules that characterized the Nation States, because they are more concerned by efficiency connectivity and security[143] issues. We should have a closer look at the foundation of the city in the Modern Age, in a pre-state era, when cities were built upon the idea of collaboration, cooperation and infrastructure. The research question that guides this analysis is the following: where do the cities of yesterday come from?

The Middle age city was born from the opposition of the bourgeoisie to the feudal system. It was a commune from the

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[141] G. Micciarelli, *Introduzione all'uso civico e collettivo urbano*, cit. at 132.

[142] P. Khanna, *Beyond city limits*, 181 Foreign policy 120, 121 (2010).

[143] P. Khanna, *Beyond city limits*, cit. at 135.

beginning[144], and its foundation was an association of citizens, mainly the *coniurationes.* The peculiar characteristic of the city was that it was made by free men, without the protection of a feudal lord (once cities became free entities, he was just a *primus inter pares[145]*) and without slavery[146]. The main concerns of the city were the defense of citizens (security) and the protection of their freedoms, in particular the freedom of the market and the price of this freedom was to enter in what Max Weber named as the "sworn fraternity"[147]. The burghers formed *coniurationes,* and corporations for defending their economic interest, political status, autonomy and to defend themselves from invasion[148]. The strong role of corporations (but also families and monastery) in the city made civic duties very important. No security or freedom was conceivable outside those structures and the commitment to the civic duties[149],that constituted the price of the freedom that a person could conquer moving to the city[150]. Gerald Frug has analyzed the medieval city from a legal perspective, conceiving them as intermediate entity between the individual and the state, not public nor private with a certain degree of autonomy from the central state and an internal freedom, achieved through a strong sense of community within the town[151]. It was hierarchical and not democratic, with a strong social and economic distinctions among members, operated by an oligarchic elite[152]. The autonomy of the city and its inhabitants merged, because individual interest and town interest could not be conceived separately. The town

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[144] The fact of being funded on an association of citizens subject to a special law was the common character of Medieval cities and Greek Polies, Engin F. Isin, Bryan S. Turner *Handbook of Citizenship Studies*, (2003), 120.

[145] L. Mumford, *The city in history* (1961), 356-361.

[146] As Max Weber clearly points out in his historical essay on cities,
"The urban citizens then usurped the right to break with lordly law – and this was the great innovation, in fact the revolutionary innovation in the medieval cities of the West in the face of all others. In the center and north European city originated the well-known saying: 'city air makes man free". Max Weber quoted by J.M. Domingues, *The City Rationalization and freedom in Max Weber*, 26, Philosophy and Social criticism,107, 110 (2000).

[147] See the Weber reconstruction of the origin of the city, in Max Weber, *The City. Translation and edited by Don Martindale and Gertrud Neuwirth,* (1966).

[148] P. Les Gales, *European Cities: social conflicts and governance* (2017) , 41.

[149] L. Mumford, *The city in history,* cit. at 138, 377-378.

[150] L. Mumford, *The city in history,* cit. at 138, 381-382.

[151] G. Frug, *The city as a legal concept,* 83 Harv. L. Rev. at 1083 (1980).

[152] G. Frug, *The city as a legal concept*, cit. at 144, 1085.

therefore emerged as an entity similar to a person, with rights and duties independent from that of its inhabitants[153]. If cities want to respond to the serious challenges that they are facing, they need to invest in new governance regimes able to restore a collaborative equilibrium in the urban context. The idea of the co-city relies upon the research efforts conducted in last years in order to investigate what kind of governance do we need for the city. The guiding research question is if, in the domain of the urban commons, in the "sharing", "peer to peer" "collaborative" age, there might be room for a new design of public institutions? Can urban assets and resources or the city as a whole be transformed into a collaborative ecosystems that enable collective action for the commons[154]? The observation of urban commons allows to understand the importance of an enabling State, that sustains collective action for the urban commons[155]. The literature on the urban commons and the existing examples of urban commons institutions such as BID's, park conservancies, community gardens suggests that a collective governance of urban commons might be employed at the urban level and we later proposed that collaborative governance strategies can be scaled up to the city level to guide decisions about how city space and common goods are used, who has access to them, and how they are shared among a diverse population. The shift from the urban commons to the city as a commons[156], analyzed using the evolving models of the sharing city and the co-city, with the major examples of Seoul (sharing city) and Bologna (collaborative city) requires a theory of collaborative governance that include a wide spectrum of agents that work together in order to co-design the governance of the city. We therefore build on the triple helix model of innovation, based on a relationship between university, industry, government and advanced the idea of a quintuple helix or pentahelix model[157]

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[153] G. Frug, *The city as a legal concept,* cit. at 144, 1087.

[154] See C. Iaione, *Governing the urban commons*, 1 I.J.P.L. 170 (2015).

[155] S. Foster, *Collective Action and the Urban Commons*, 87 Notre Dame L. Rev. 57 (2011).

[156] S. Foster and C. Iaione *The city as a commons,* cit. at 62.

[157] Christian Iaione, Paola Cannavò, *The Collaborative and Polycentric Governance of the Urban and Local Commons*, 5 Urban Pamphleteer 29 (2015). See also E.G. Carayannis, D.F.J. Campbell, *Triple Helix, Quadruple Helix and Quintuple Helix and how do knowledge, innovation and the environment relate to each other? A proposed framework for a trans-disciplinary analysis of sustainable development and*

of innovation for governance of the city as a commons. The quintuple helix model is a concrete expression of the idea of the public-private-commons partnership and is designed to overcome the dichotomy between public vs private in managing the commons and to give relevance to the proactive role of knowledge institutions, that comprehend not only universities but also cultural organization, foundation and schools as the neutral driver of the governance system[158]. The civic, private, public, cognitive and social actors (universities and knowledge institutions, local businesses and enterprises that implement corporate social responsibility, single urban inhabitants, informal group and micro commoners and hyper local communities) work together in order to build the new governance of the city, experiment and re-build the foundations of social contract of the city. The concept of the quintuple helix was incorporated in the Pact of Amsterdam, The Amsterdam Pact states that

> "In order to address the increasingly complex challenges in Urban Areas, it is important that Urban Authorities cooperate with local communities, civil society, businesses and knowledge institutions. Together they are the main drivers in shaping sustainable development with the aim of enhancing the environmental, economic, social and cultural progress of Urban Areas. EU, national, regional and local policies should set the necessary framework in which citizens, NGOs, businesses and Urban Authorities, with the contribution of knowledge institutions, can tackle their most pressing challenges"[159].

For envisioning a co-city, we should have a deeper understanding of the commons, envisaging them as *commoning*[160], which means as a dynamic process, with a social and relational value. The co-city is able to capture the true essence of

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social ecology, 1 Int. J. of Soc. Eco. Sust. Dev. 41–69 (2010) (proposing a quintuple helix system of innovation that comprehend environmental systems).

[158] S. Foster and C. Iaione *The city as a commons,* cit. at 62.

[159] *Urban Agenda for the EU, Pact of Amsterdam,* Agreed at the Informal Meeting of EU Ministers Responsible for Urban Matters on 30 May 2016 in Amsterdam, The Netherlands, available at http://urbanagendaforthe.eu/pactofamsterdam/.

[160] Prominent public intellectuals talk in the field of the commons about "commoning" as a powerful dynamic process able to create social value and relation. D. Bollier and S. Helfrich, *Patterns of commoning* (2015).

collaboration: while the perspective of a co-city as a collaborative idea of the city and a model that encompass them all and the commons as the "*elementary particle*". To conceive the co-city it is important to work across the boundaries, building upon the main elements of the model analyzed above, introducing elements of environmental awareness, technology and putting collaboration as a cross cutting methodology to govern the city, with a special attention to the issue of rights, since the co-city model emerges from the right to the city approach. Benjamin Coriat and Antoine Dolcerocca reminded that the issue of rights in the commons is crucial[161] and that an understating of public goods and services through the lenses of the commons is crucial. This approach requires to consider relationality as an organizing principle[162], and to promote, as Yochai Benkler suggested, the opportunities provided by sharing and peer production as the emergence of a new form of economic production[163]. Other prominent scholars have highlighted that the idea of the commons imply the transformation of public goods into commons and this shift might create new rights of protection for commoners[164].

If the metaphor of the knowledge – based city calls for a vision of the city as a market place, the nature-based city envisions it as an ecological system and the technology based city as a technological platform, the morphology of the co-city is the one of the city as a commons[165], which is to say that the city must be reconceived as an infrastructure that enables social and economic pooling to use, access, manage, produce material and immaterial resources in common. For conceiving a co-city, we need to think

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[161] See A. Dolcerocca and B. Coriat, *Commons and the Public Domain: A Review Article and a Tentative Research Agenda*, 48 Rev. Radical Political Econ 127– 139 (2016).

[162] D. Bollier, *Beyond Development: The Commons as a New/Old Paradigm of Human Flourishing*, David Bollier, (June 25 2016), available at http://bollier.org/blog/beyond-development-commons-newold-paradigm-human-flourishing.

[163] Y. Benkler, *The wealth of networks. How social production transform markets and freedom* (2006).

[164] D. Bollier, *State power and commoning*, a report on a Deep Dive Workshop convened by the Commons Strategies group in cooperation with the Heinrich Boll Foundation, available at http://bollier.org/blog/new-report-state-power-and-commoning.

[165] S. Foster and C. Iaione ,*The city as a commons,* cit. at 62.

about the commons as a *process*[166] rather than a *set of resources*[167] in the city, to focus on the multi-dimensional character of the commons[168] and to consider many different kind of commons[169] that coexist and interact. The concept of the commons has also been addressed in this perspective by the legal anthropologist

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[166] Bollier has highlighted that the commons are a new cultural form, and the discourse on the commons help the people to identify new mental maps to represent the current time. D. Bollier, *Growth of the Commons Paradigm*, in E. Ostrom & C. Hess (Eds) *Understanding Knowledge As A Commons* 12 (2007).

[167] E. Ostrom defined common-pool resource as a "natural or man-made resource that is sufficiently large as to make it costly (but not impossible) to exclude potential beneficiaries from obtaining benefits from its use". E. Ostrom, *Governing the commons*, 30 (1990). She later stated with Hess that shared resource systems, the so-called common-pool resources, are "types of economic goods, independent of particular property rights". E. Ostrom and C. Hess, *Understanding Knowledge As A Commons,* cit. at 159.

[168] Tine de Moor has argued that we should look at the commons from a three-dimensional approach, because a commons is at the same time: a resource, a commons property regime (the ownership regime is neither public nor private and a common pool institution, which is the institution set up to make that cooperation possible. T. De Moor, *Avoiding tragedies: a Flemish common and its commoners under the pressure of social and economic change during the eighteenth century,* 62, Econ. Hist. Rev.1, 10 (2009) and T. De Moor, *What Do We Have in Common? A Comparative Framework for Old and New Literature on the Commons,* in 57 IRSH (2012), 269–290.

[169] Moving the analysis from natural commons and Common Pool Resources to the knowledge, commons, Ostrom and Hess has underscored that knowledge is a highly complex resource, with a dual functionality as a human need and an economic good. E. Ostrom and C. Hess, *Understanding knowledge as a commons*, cit. at 223, 4. Madison, Strandburg and Frischmann define knowledge commons as "an institutional approach (commons) to governing the production, use, management, and/or preservation of a particular type of resource (knowledge)". For them, the term commons does not denote the resource or the community, the commons is the institutional arrangement of these elements and their coordination. M. J. Madison, K.J. Strandburg and B. M. Frischmann, *Knowledge commons*, in P. Menell & D. Schwartz, eds. 1 (2016), *Research Handbook on the Economics of Intellectual Property Law* (Vol. II – Analytical Methods). Benkler's work is mainly focused on conceptualization of the growth-oriented, open commons in the networked economy. Y. Benkler, *The Essential Role of Open Commons in Market Economies,* 80 U. Chi. L. Rev. 1499, (2013). Bollier has highlighted that the commons are a new cultural form, and the discourse on the commons help people to indentify new mental maps to represent the current time. To Bollier, the commons are "not a manifesto, an ideology, or a buzzword, but rather a flexible template for talking about the rich productivity of social communities and the market enclosures that threaten them". D. Bollier, *Growth Of The Commons Paradigm*, in E. Ostrom and C. Hess, *Understanding knowledge as a commons*, cit. at 159, 38.

Etienne Le Roy, who observed that "law is not so much what the texts say, but rather what the actors do with it"[170], so it doesn't matter what the law says, what is relevant is what you do with it. Therefore, he assumes the centrality of the creation of the commons. The struggle of the conventional law in managing the commons can be better understood is one looks at how much commons are grounded in social practices, in social relations: "it is precisely these practices that we need to use if we are to enable people to "be commoners" and to take paths that are secured in a different way – not purely through the legality of laws and property rights"[171]. Etienne Le Roy conclude that the making commons that comes alive again in economic and legal system can be interpreted in a double manner, as a return to the pre-capitalist and pre-state organizational principle, or as a groundbreaking moment with the current state. Radical political economics Benjamin Coriat help us framing the question about the commons as a larger question about how we might "commonify" our understanding of public services and goods. The idea of the commons is not merely a question of avoiding privatization of assets and services, but is also about the transformation of public goods into commons, a new conceptual category, and this shift creates new rights of protection for commoners[172].A conceptualization of the commons that focus on the central role of commoners and social movement, and operationalize the legal basis of the commons is provided by Ugo Mattei[173], Maria Rosaria Marella[174] and the Italian scholars of the Constituent of the commons experience[175].

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[170] É. Le Roy, *How I Have Been Conducting Research on the Commons for Thirty Years Without Knowing It*, in D. Bollier and S. Helfrich, *Patterns of commoning* (2015).

[171] É. Le Roy, *How I Have Been Conducting Research on the Commons for Thirty Years Without Knowing It*, cit. at 163.

[172] D. Bollier, *State power and commoning*, a report on a Deep Dive Workshop convened by the Commons Strategies group in cooperation with the Heinrich Boll Foundation, available at http://bollier.org/blog/new-report-state-power-and-commoning.

[173] U. Mattei, *Protecting the Commons: Water, Culture, and Nature: The Commons Movement in the Italian Struggle against Neoliberal Governance* 112 South Atlantic Quarterly 2 (2013).

[174] M. R. Marella, *The commons as a legal concept*, L. critique, (2016).

[175] U. Mattei and S. Bailey, *Social Movements as Constituent Power: The Italian Struggle for the Commons* Ind. J. Global Legal Stud. (2013).

In the city one can encounter different kind of commons. This paragraph will roughly discuss the three main situations and characteristics that can occur in the city. The idea of the co-city as a commons-based city bring us to a reflection on the distinction between several kinds of urban commons with their needs and peculiarity, that request different governance strategies. After a brief overview on the different situation that can occur to the commons Cooperation emerges as a cross cutting design principles for different situations, and it will be outlined as a key factor for a pooling strategies, in order to enable sharing and collaboration. Modern cities can be conceived as a multi-layered composition of highly complex resources that contain all degrees[176] of tragedy and comedy[177] of the commons. The history of contemporary scholarship on the commons is marked by mainly three conceptions of the commons: the tragedy of the commons, user-managed commons and the comedy of the commons[178]. Those two situations might occur also depending on the kind of commons involved.

2.2.1. The tragedy of the commons: scarcity and congestion

The phenomenon of the tragedy of freedom in the common has been identified by Garrett Hardin with his well-known article "The tragedy of the commons"[179]. The idea behind his theory is that when there is a commons with an open access, a tragedy will occur and the resource will be over-exploited and destroyed. The example used by the author is an open access pasture. Every herdsman seeks to maximize his utility by adding more animals to it. This utility has a positive component, the revenues for the herdsman of selling more animals and a negative component, the additional overgrazing created by one more animal. But since the negative component is shared, this negative utility is lower. Hardin argues that "each man is locked into a system that compels

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[176] This is an analogy to what Jane Jacobs wrote in 1961 while discussing successful and unsuccessful neighborhoods: "our cities contain all degrees of success and failures". See J. Jacobs, *The death and life of great American Cities,* 112 (1989).

[177] See generally C. Rose, *The tragedy of the commons: commerce, customs and inherently public property,* 53 U. Chi. L. Rev.3 (1986).

[178] B. Daniels, *The tragicomedy of the commons*, BYU L. Rev. 1347, 1371-1373 (2014).

[179] G. Hardin, *The tragedy of the commons*, Science, 3859, 1243-1248 (1968) at 1244.

him to increase his herd without limit--in a world that is limited. Ruin is the destination toward which all men rush, each pursuing his own best interest in a society that believes in the freedom of the commons[180]", therefore "freedom in a commons brings ruin to all"[181].Hardin concludes that since "individuals locked into the logic of the commons are free only to bring on universal ruin; once they see the necessity of mutual coercion, they become free to pursue other goals[182]" and finally state that the only solution possible is relinquishing the freedom to breed. In introducing her major empirical research work Governing the commons, Elinor Ostrom outline the research design and explains that the study is focused on small-scale Common Pool Resources, with a limited number of individuals affected from the resources (from 50 to 50.000 people are dependent from it, and consequentially highly motivated to solve problems[183]). Elinor Ostrom also highlights the limits of the types of Common Pool Resources:

> (1) renewable rather than nonrenewable resources, (2) situations where substantial scarcity exists, rather than abundance, and (3) situations in which the users can substantially harm one another, but not situations in which participants can produce major external harm for others[184].

The main characteristics of these commons that are subject to tragedy are rivalry in use and non-excludability. These features trigger or incentivize or simply allow phenomena of overconsumption of the resource beyond its capacity of renewability. The tragedy is basically the tale of a crowding or congestion phenomenon in the use of a given resource. Such tragedy brought forward by the crowding or congestion phenomenon generates scarcity, because it hampers the renewability of the resource, and ultimately may lead to the destruction of the resource if the limit beyond which the resource cannot renew itself by itself is overcome. Those kinds of commons,

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[180] G. Hardin, *The tragedy of the commons* cit. at 172, 1244.
[181] G. Hardin, *The tragedy of the commons* cit. at 172, 1244.
[182] G. Hardin, *The tragedy of the commons* cit. at 172, 1248.
[183] E. Ostrom, *Governing the commons* cit. at 167. 26.
[184] E. Ostrom, *Governing the commons* cit. at 167.

that Benkler labels as the "Ostrom School commons"[185], and Hess refers to as the traditional commons[186], are the object of study of Elinor Ostrom in her major empirical research which proves that the tragedy can be avoided by fostering cooperation among users in the sharing of the resource. Building governance regimes that govern the cooperation in the sharing of the resource may guarantee the sustainability or renewability of the resource.

2.2.2. The comedy of the commons in the city: abundance and participation.

An opposite tale to the tragedy of the Ostrom congestible commons, the so-called comedy of the commons, was introduced in the legal scholarship thanks to the intuition of Carol Rose[187] and it might appear in case of non-tragic commons, open commons, or productive/growth-oriented commons[188]. The comedy of the commons can be described as a situation where congestion and agglomeration of users is needed in order to raise the value of the commons, and the commons have an expansive capacity, so the value increase as far as people participate. It seems that they are not users of the commons, but also producers of the commons. Carol Rose was retracing the doctrine of "inherent publicness"[189], and described cases of goods, such as roads or waterway, that must be open to the general public, not subject to private property nor to a specific community of users. Rose uses the example of recreational activities, like dance, in which each added dancer that participates, makes the value of participating higher, because "each added dancer brings new opportunities to vary partners and share the excitement"[190]. The value of those activities relies

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[185] Y. Benkler, *The Essential Role of Open Commons in Market Economies* cit. at 162, 1520.

[186] C. Hess, *Mapping the New Commons,* Presented at The Twelfth Biennial Conference of the International Association for the Study of the Commons, Cheltenham, UK, (July 14-18 2008) http://surface.syr.edu/cgi/viewcontent.cgi?article=1023&context=sul.

[187] C. Rose, *The comedy of the commons: commerce, customs and inherently public property,* cit. at 170.

[188] Y. Benkler, *Commons and Growth: The Essential Role of Open Commons in Market Economies,* cit. at 162, 1511.

[189] C. Rose, *The comedy of the commons: commerce, customs and inherently public property,* cit. at 170, 770.

[190] C. Rose, *The comedy of the commons: commerce, customs and inherently public property,* cit. at 170, 767. Those are activities where "Increasing participation enhances the value of the activity rather than diminishing it" at 768.

upon the fact that they reinforce solidarity and fellow-feeling of the whole community. She points out how this is "the reverse of the "tragedy of the commons": it is a "comedy of the commons"[191].As also Fennell has highlighted, there are some aspect of life in the city where the abundance of participants allows the creation of more value, also relying upon agglomeration benefits[192]. The comedy of the commons in the city might therefore be expressed by those situations where the abundance of participant does not create congestion crowding or over-consumption. It instead produces an added value and reinforces the commons.

2.2.3.   The tragicomedy of the commons: capacity.

We will focus here on the analysis and literature[193] that framed infrastructure as commons to explain why and how we need to talk about also the tragicomedy of the commons in the city. Fennell underscored that, in the city, the tragedy and the comedy of the commons might potentially come together[194] also because there is both a risk of under-cultivation[195] (when the city doesn't succeed in generating the agglomeration benefits) and overconsumption/overcrowding or congestion as negative effects related to urbanization[196]. Infrastructure commons are highly complex resources, because they share some characteristic with the tragic congestible commons (risk of congestion and over-usage) and some features of the open, non congestible commons (infrastructure of the city is a commons of crucial importance due to the high degree of complexity of urban environments). Physical infrastructure and online infrastructure are crucial for the city. As Parag Khanna has recently stated "no matter which way we connect, we do so through infrastructures"[197]. Frischmann helps

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[191] C. Rose, *The comedy of the commons: commerce, customs and inherently public property,* cit. at 170, 779.

[192] L. A. Fennell, *Agglomerana,* BYU U. L. Rev. 1373 (2015) at 1382.

[193] See. C. Iaione, *The Tragedy of Urban Roads,* Fordham U. L. J. (2009) and B. Frischmann, *Infrastructure* (2012).

[194] L. A. Fennell, *Agglomerana,* cit. at 185.

[195] L. A. Fennell, *Agglomerana,* cit. at 185, 1375.

[196] L. A. Fennell, *Agglomerana,* cit. at 185.

[197] Khanna, cit. at 199, 7. For a critical analysis of Khanna's Connectography, see D. W. Drezner, *Connectography by Parag Khanna*, The New York Times, available at http://www.nytimes.com/2016/05/01/books/review/connectography-by-parag-khanna.html (last visited April 29 2016).

us to conceive infrastructure (both traditional - transportation and communication- and non-traditional (environmental and intellectual- infrastructures)[198]as commons. He considers that infrastructures have a social value that exceeds the private market value, and open commons management is therefore a very attractive strategy for infrastructure commons, because it offers opportunities for users to generate public and social goods, although with a range of complications, such as congestion management[199]. Following Benkler's suggestion to consider the wide range of approaches for dealing with commons dilemmas[200], avoiding the risk of a too narrow approach to the topic, we will need to envision a scalar and flexible governance strategy for infrastructure commons in the city. Therefore, we can assume that the main situations that can occur are scarcity and congestion in a tragic commons, a call for agglomeration in a constructed commons and a third, more complex situation, that of the infrastructure were you might need to both prevent congestion and expanding the capacity of the resource.

From the literature on the commons, we can see that a tension emerges from the opposition between scarcity and agglomeration/abundance. If we conceive the whole city as a commons, we can conceive it as an open commons with different degrees of capacity. The concept of *capacity* could be the element that bridges the space between these two opposite poles on the spectrum. When we are dealing with inherently tragic commons, or natural resources commons, we should build a regulatory governance strategies that aims at enabling of cooperation through sharing. For overcoming scarcity of the natural resource commons, cooperation through sharing is needed. Ostrom demonstrated that, through cooperative strategies, commons users can avoid the tragedy and maintain the value of the commons for the community. In an urban or metropolitan context[201], congestion

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[198] B. Frischmann, *Infrastructure*, cit. at 186, 189-253.

[199] B. Frischmann, *Infrastructure*, cit. at 186, 116.

[200] Y. Benkler, *Commons and Growth: The Essential Role of Open Commons in Market Economies*, cit. at 162, 1520.

[201] Hardin highlighted the difference between resources in a natural context and in an urban context, although from a moral standpoint. He adopts a definition of morality that is context based: *the morality of an act is a function of the state of the system at the time it is performed.* Therefore, he argues, "Using the commons as a cesspool does not harm the general public under frontier conditions, because

is very likely to happen and produces different and relevant outcomes. As Sheila Foster has explained, urban commons can share the same rivalry and free-rider problems that leads to the tragedy of the commons[202], particularly through the phenomena of regulatory slippage[203]. For dealing with the need of generating or producing abundance/construction/agglomeration for the artificial/constructed commons, we should enable cooperation through collaboration. The open commons branch of studies, as Benkler[204] highlights, is focused on the limits of particular mechanisms to overcome collective action problems and emphasize the necessity of symmetric access rules and reduced power to appropriate through exclusion, allowing for a flexible and dynamic use[205]. As Madison, Strandburg and Frischmann has pointed out, the conventional theory of the tragic commons has been put into question by the study of collaborative institution for the generation of knowledge and innovation[206]. Fennel has stressed the positive effect of urban proximity, that can generate "energy"[207] and provided suggestions about policy instruments that are supposed to be designed in order to assemble participants optimally[208]. This might be applied to the urban cultural or knowledge commons, a kind of constructed commons[209].

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there is no public; the same behavior in a metropolis is unbearable." G. Hardin, *The tragedy of the commons*, cit. at 172, 1245.

[202] S. Foster provides several examples in which rival and degraded common urban resources are being collectively restored and managed by groups of users in the absence of government coercion, and without transferring the ownership to the private. Sheila Foster, *The city as an ecological space: social capital and land use*, cit. at 42.

[203] S. Foster, *The city as an ecological space: social capital and land use,* cit. at 42.

[204] Y. Benkler, *Between spanich huertas and the open road. A tale of two commons?* In M. Madison B. Frischmann, and K. Strandburg, *Governing knowledge commons* (2014).

[205] Y. Benkler, *Commons and Growth: The Essential Role of Open Commons in Market Economies*, cit. at 162, 1555.

[206] M. J. Madison, K.J. Strandburg & B. M. Frischmann, *Knowledge Commons,* Forthcoming, Research Handbook on the Economics of Intellectual Property Law (Vol. II – Analytical Methods), Peter Menell & David Schwartz, eds. Edward Elgar Publishing, (2016).

[207] L. A. Fennell, *Agglomerana,* cit. at 185, 117.

[208] L. A. Fennell, *Agglomerana* cit. at 185, 125.

[209] For Madison et al, cultural commons are "constructed" in the sense that their "creation, existence, operation and persistence are matters not of pure accident or random chance, but instead of emergent social process and institutional design". M. J. Madison, B. M. Frischmann & K. J. Strandburg, *Constructing*

Collaboration between different actors is the strategy through which agglomeration, constructed/knowledge commons creation and innovation[210] is generated, paying attention to balance impact and consequences, taking into account that the same ingredients that produce agglomeration benefits might also bring congestion[211]. Cooperation through collaboration could be the strategy through which agglomeration is generated in those commons, With artificial or constructed commons in the city, cooperation through collaboration is the path through which create abundance or agglomeration, promoting activities where a greater participation produces exponentially positive externalities, in a virtuous circle[212]. Finally, for preventing congestion and/or generate expansion of the capacity of the infrastructure commons, we should enable cooperation through pooling. This third category of commons, infrastructure commons, is in fact an appropriate example to tell us something more about the idea of the city as a commons and the co-city. With infrastructures, both prevention of congestion and capacity generation are needed and the concept of scarcity can be substituted by the concept of capacity. The three different situations envisioned above have elements that link them one another, and is possible to find elements of tragedy and comedy that coexist[213], particularly in the city, and this makes it hard to govern them. In the infrastructure commons, this situation of tragicomedy can be emphasized. Frischmann consider that, although openness should be the baseline principle for public social and mixed infrastructure, there might be cases where commons management come with congestion management, depending on the characteristic of the

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commons in the cultural environment, in D. Bollier and S. Helfrich (eds), *The wealth of the commons,* (2010).

[210] Benkler has explained how innovation and knowledge commons generation could emerge from collaboration between different actors. Y. Benkler, *Peer Production and Cooperation,* forthcoming in J. M. Bauer & M. Latzer (eds.), *Handbook on the Economics of the Internet,* (2016).

[211] See the reasoning followed by Fennel in explaining the relation between positive and negative externalities of urban proximity. L. A. Fennell, *Agglomerana,* cit. at 185, 1374.

[212] C. Rose, *The comedy of the commons: commerce, customs and inherently public property,* cit. at 170, 769.

[213] Daniels identified several situations where tragedy and comedy of the commons overlaps. B. Daniels, *The tragicomedy of the commons*, cit. at 171, 1371-1373.

infrastructure. I have already highlighted that traffic congestion represent a typical situation of tragedy of the commons, and that the best response to the tragedy of road congestion has to rely on market-based regulatory techniques and public policies aimed at controlling the demand-side of transportation congestion. Quantity instruments, such as tradable permits of road usage and real estate development, can better internalize all the externalities that road congestion produces[214], and I argued that the use of commons should be regulated at the level of individuals, urban inhabitants (the lowest level possible) who are facilitated by the government in taking on the challenge to pursue the general interest in their everyday lives[215]. In case of infrastructure commons, cooperation might be a demand-side strategy to enhance capacity and efficiency of the existing network, while fighting congestion (car-pooling). Infrastructure both realize and create social value for individuals who obtain access to them[216] and through pooling practices, a process of creation of new infrastructures occurs, in a sort of network effect with the aim of both preventing road congestion and expanding resource capacity.

The research question that this paper wants to ultimately investigate is in fact whether urban commons might be re-conceptualized as infrastructures, reverting Frischmann's theoretical framework of infrastructures as commons. In such a way, urban commons are re-conceptualized as means to enable the production of "urban knowledge as a commons" through continuous experimentation processes that bring together the actors of the quintuple helix urban co-governance approach[217]. Conceiving commons as infrastructures means to identify their main role of the commons for the pooling paradigm, as it's been exposed above. Infrastructures, in the co-city, have a triple meaning: 1) enabling collective action for the commons, 2) preparing the transition to the pooling paradigm 3) redistribution of crucial urban resources such as urban energy[218].

3.   Pooling in the city
3.1   Pooling as a fourth mode of exchange

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[214] C. Iaione, *The tragedy of urban roads,* cit. at 186, 893.

[215] C. Iaione, *The tragedy of urban roads,* cit. at 186, 949-950.

[216] B. Frischmann, *Infrastructure*, cit. at 186, 141.

[217] C. Iaione, *The CO-city*, 75 The Am. J. Econ. Soc, 2 (2016).

[218] H.J. Wiseman, *Urban Energy,* 40 Fordham Urb. L. J. 5 (2013).

The co-city paradigm understands the city as a commons which is a metaphor to describe the morphology of the city as an infrastructure that enables the collective action. The co-city relies heavily upon the social paradigm of collaborating, sharing, cooperating and therefore represents a shift from the paradigm where competition is dominant. The co-city paradigm represents a fourth way to deal with the commons dilemma in the urban context, that coexists with the previous, the State/Leviathan solution, the market economy / privatization solution and reciprocity.

Kojin Karatani recently proposed a classification of the evolution of societies through four types of mode of exchange: reciprocity, plunder and redistribution, commodity exchange and a fourth type of exchange, still emerging, named X, an enhanced expression of the first mode of exchange, re-emerged after being repressed for centuries. It could be pooling, as the very first mode of exchange of the nomadic societies, and it would co-exist with the other modes of exchange. Pooling is described as a principle of equality achieved through redistribution[219], typical of the nomadic small bands, before the rise of clan society arise through the "sedentary revolution", that allowed the emergence of inequality and the principle of reciprocity, where unable to storage, therefore spoils were pooled and equally distributed[220] in a form of pure gift without obligation for reciprocity. The co-city paradigm can create a framework that enables the cohesion/alignment of geographic and content interest through a methodological approach that favors pooling techniques. Pooling therefore allows to rethink the city as a myriad of communities/urban pools, with an open and collaborative design in order to avoid ossification and the formation of a strong and sectarian group identity. As complex system theorist Yanerr Bam Yam states, "to be successful in a high complexity challenges requires teamwork"[221] and "the search for partners and coalescence is into team is an essential dynamic of society today[222]". The element of urban pools in the co-city paradigm relies upon the generative potential of the commons. The relational characteristic of the collective governance of resources, the peer to peer activities or the sharing economy

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[219] K. Karatani, *The structure of world history* 42 (2014).
[220] K. Karatani, *The structure of world history*, cit. at 212, 43.
[221] Y. Bar Yam, cit. at 26, 2.
[222] Y. Bar Yam, cit. at 26, 2.

teaches us that the commons are a process rather than a certain type of good. A pooling strategy is an iterative and dynamic activity of mixing and matching[223] governance structures. Poolism means cooperation in both sharing and collaboration, as we can assume from the observation of infrastructure, where both situations can occur and a scalar and adaptive strategy is needed. One should avoid too narrowed or dichotomous views in terms of congestion or abundance, and start reflecting on the concept of *capacity*, focusing the attention also on the *demand-side* of the problem. We can therefore conceive the commons as the infrastructures in the city that foster cooperation enabling pooling economies. The idea of pooling economy is rooted in the sharing economy matrix, introduced in the Opinion "The local and regional dimension of the sharing economy", approved by the Committee of the Regions of the European Union[224]. The reasoning starts from the assumption that the sharing economy has an innovative and dynamic nature, encompassing phenomena presenting the following features:

> (i) its main agent does not act as the standard economic agent, the homo oeconomicus;
> (ii) the sharing economy adopts a platform approach whereby relations, reputation, social trust and other non-economic motives within a community become one of the main drivers;
> (iii) on a large scale the sharing economy makes intensive use of digital technologies and data collection. Data becomes primary raw material. Fixed costs are mostly externalized;
> (iv) on a smaller, local scale some sharing economy initiatives might be limited to the common use or management of physical assets (e.g. co-working spaces, urban commons, etc.) or to new forms of peer-to-peer, sometimes street or building level, welfare systems.

Sharing economy seems to question the model of *homo*

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[223] Y. Benkler, *Commons and Growth: The Essential Role of Open Commons in Market Economies*, cit. at 162, 1553.

[224] See the Opinion of the European Committee of the Regions, *The local and regional dimension of the sharing economy*, available at http://cor.europa.eu/en/activities/opinions/Pages/opinion-factsheet.aspx?OpinionNumber=CDR%202698/2015.

oeconomicus, as the main economic agent[225] and might give rise to a new economic identity. As Ostrom and Janssen[226] has highlighted, empirical research on social dilemma has pointed out that the model of the individual that seek *only* short-term, material benefits, outside of competitive situations (including competitive political situations) is no longer a good foundation, although one shouldn't assume that all individuals are willing to contribute to collective benefits[227]. The individual that constitute the heart of this new economic identity is an individual not guided by the perpetual quest to maximize its own material interests, an individual unwilling to act alone[228]. It is an archetype of individual who, while not giving up the pursuit of her passions and interests, understands that her individual freedom is nothing if it is not associated with a commitment to the community, if the "acting alone" is not paired with the "acting in common"[229]. Sharing economy main agent might be thus framed more as a *"mulier activa",* able to act in the public – social, economic, political – arena and to place herself in relation to others for taking care of the general, common interest which is the main of the three pillars of a *"vita activa"*[230]. A distinction between the various forms of sharing economy is however needed[231], for clarifying the argument of the urban pooling. The typology is based on a first distinction between "sharing economy in the strict sense" and collaborative forms of sharing economy: 1) "sharing economy in the strict sense composed of: access economy, for sharing economy initiative whose business model implies that goods and services are traded on the basis of access rather than ownership. It refers to renting things temporarily rather than selling them permanently;

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[225] Encyclical Letter *Laudato si'* of the Holy Father Francis on care for our common home (24 May 2015). See paragraphs 13, 14, 90, 211. See also L. Trotsky, Attention to small things, (1 October 1921).

[226] M. Janssen and E. Ostrom, *Empirically based, agent-based models,* 11 Ecology and Society 37 (2006) .

[227] M. Janssen and E. Ostrom, *Empirically based, agent-based models,* cit. at 284, 3.

[228] For an archetype of individual willing to collaborate or "reciprocate" see for instance the "homo reciprocans" of S. Bowles, H. Gintis, *Homo reciprocans,* (2002).

[229] A. de Tocqueville, *Democracy in America,* (1835).

[230] H. Arendt, *The human condition,* (1958).

[231] Opinion of the European Committee of the Regions, *The local and regional dimension of the sharing economy,* available at http://cor.europa.eu/en/activities/opinions/Pages/opinion-factsheet.aspx?OpinionNumber=CDR%202698/2015.

Gig economy, for sharing economy initiatives based on contingent work that is transacted on a digital marketplace. 2) Pooling economy is composed of: collaborative economy, sharing economy initiatives that foster peer-to-peer approach and/or involve users in the design of the productive process or transform clients into a community; "commons-based economy", "open cooperativism", "open platform cooperativism"[232] for sharing economy initiatives that are collectively owned or managed, democratically governed, do not extract value out of local economies but anchor jobs, respect human dignity and offer new forms of social security.

3.2   Forms of urban pooling

The concept of pooling[233] advanced above will be better articulated in this section through three concrete examples of forms of urban pooling for the commons situations. The current social and economic transitions might envisage a new morphology of the State: the enabling, relational, entrepreneurial[234] State. This would require a reconfiguration of the core categories of public law and administrative law. Public law scholar Jean Bernard Auby has already highlighted that the "law of cities" is one of the groups of realities on which scholars should concentrate research and reflections in order to keep up with the transformations which

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[232] J. Schor, *Debating the sharing economy*, (2014).

[233] Pooling may be considered part of a broader institutional shift at the urban as much as the regional, national, and international level toward networks of governmental actors. *See* C. N. Stone, *Regime Politics: Governing Atlanta* 1946-1988 at 222-29 (1989) (rejecting a model of urban governance oriented around "the difficulty of maintaining a comprehensive scheme of control" and arguing that "[i]n a world of diffuse authority, a concentration of resources is attractive. The power struggle concerns, not control and resistance, but gaining and fusing a capacity to act-power to, not power over"); A-M. Slaughter, *A New World Order 1*-3 (2005) (arguing networks of government officials, such as police investigators, financial regulators, and legislators are "key feature of world order in the twenty-first century"); C. P. Gillette, *The Conditions of Interlocal Cooperation*, 21 J.L. & Pol. 365 (2005) (proposing changes to legal and institutional structure to facilitate cross-subsidies from one locality to another); D. Renan, *Pooling Powers*, 115 Colum. L. Rev. 211, 219 (2015).

[234] M. Mazzucato, *The entrepreneurial state: debunking public vs. private sector myths,* (2013); S. Foster, *The city as an ecological space: social capital and land use,* cit. at 42; G. Cook, R. Muir, *The relational State. How recognizing the importance of human relations could revolutionize the role of the state,* cit. at 253.

affect public law in the current era[235]. In the age of the modern state, local autonomy at the urban level has been increasingly comprised, of course with differences among the countries. It has already been highlighted above that pooling at the level of the executive and central administration destabilize administrative law, because it breaks down the rigid separation of authority and expertise on which it is based[236].

3.2.1. Regulatory tools for the urban commons

The Regulation on the Urban Commons for the City of Bologna, Italy, approved in 2014 by the city as the result of a process of experimentation[237]designed a structure by which citizens and local administration can collaborate to develop and manage the city's "urban commons," which can include public space, urban green spaces, abandoned buildings, and other infrastructure. Citizens and the public administration can sign a "pact of collaboration", the central regulatory tool provided by the Bologna Regulation[238], which contains the object of the collaboration, which can consist of a long-term or punctual shared care intervention or a regeneration project of an urban commons (public spaces, buildings). The Bologna Regulation is been approved in several cities in the Italian context, whom engaged in a sort of "race" to the regulation of the urban commons, often underestimating the key feature of the success of Bologna's model, which is the process of experimentation conducted before the approval of the Regulation and the high degree of adaptivity of its implementation. Observers has highlighted the example of the Chieri approach to the Regulation of civic collaboration for the

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[235] J.B. Auby, *The Role of law in the legal status and powers of cities*, 2 IJPL 302, 305 (2013).

[236] D. Renan, *Pooling powers,* 115 Col. L. Rev. 211, 249 (2015).

[237]According to the analysis of Ugo Mattei and Alessandra Quarta, the Bologna regulation and the other city regulations for the commons represents a reaction of city governments to the wave of occupations and reclaiming of the right to the city. The regulations for public collaboration for the urban commons might achieve a significant impact, in terms redistributive effects, only if there is an activation of the communities affected and there is a real devolution of power, therefore the authors suggest a strong monitoring activity. U. Mattei and A. Quarta, *From the right to the city to urban commoning? Thoughts on the generative transformation of property law*, 1 The Italian Law Journal, 2 (2015) at 320-324.

[238] The model of the collaborative city, of which the Bologna experimental process is an example, is explained deeply in Foster and Iaione, *supra note* 14 and C. Iaione, *The CO-city,* cit. at 210.

urban commons[239]. Also the case of Turin, as explained earlier in the article. Also the case of Turin represents a good example in this line. The Turin City Council approved the Regulation on January 11th of 2016, at the end of the mayoral term of Piero Fassino. The Turin Regulation[240] took inspiration from the Bologna version. Therefore, it governs the forms of collaboration among citizens and administration for the care, shared management and regeneration of urban commons, requested by city inhabitants or responding to the solicitation of the City, pursuant to articles 114 paragraph 2, 117 paragraph 6 and 118 of the Italian Constitution through the adoption of non-authoritative administrative acts, based on a participatory approach, the so called 'pacts of collaboration'. It nevertheless applied some peculiar adaptations to the Bologna version, such as the following: it provides an articulated spectrum of types of interventions on the commons (article 6): cure and co-management can be short term or long term, while regeneration can be temporary or permanent and it might address a complex system of goods and activities (article 6). It also empowers the City to directly take the economic responsibility for realizing actions and interventions provided by the pacts of collaboration (article 16). The city cannot transfer direct economic contributions to active citizens, unless the pact of collaboration provides for interventions that the City considers of relevant public interest and provided that the resources used by active citizens are appropriate for the scale of the intervention. In the latter case, the city can provide direct economic contribution, such as: a) free use of public buildings; b) utilities taken care of by the City c) maintenance expenses taken care of by the city; d) free availability of materials that are necessary to realize the intervention (article 16). Finally, what is particularly innovative about the Turin approach to the Regulation on civic collaboration for the urban commons is the administration's effort to build an infrastructure internal to the City Bureaucracy that coordinates different departments of the City in order to push them to work in synergy on the collaboration proposals. This model avoids the

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[239] C. Angiolini, *Possibilità e limiti dei recenti regolamenti comunali in materia di beni comuni*, in A. Quarta (eds.), *Beni comuni 2.0* (2017).

[240] Regulation of the City of Turin n. 375 on civic collaboration for the care, shared management and regeneration of the urban commons, approved through deliberation of the City Council on January the 11th 2016 (mecc. 2015 01778/070), executive since 25 January 2016.

classical problem of fragmentation in public-policy making and in implementation processes. To create such an integrated and synergic structure, the administration created a Working Group, established by the Regulation at article 7, second paragraph of the Regulation[241]. The working group has a key role in the process that leads toward the signature of pacts of collaboration as it will be the first recipient and evaluator of citizen's proposal. It works closely with the Council Committee, referred to by the Regulation at article 25, second paragraph, that provides guidelines for those pacts which aim at intervening on public buildings or other city owned properties, and evaluates the necessity of providing corrections to the pacts. Innovative in this approach is the fact that the Working Group is composed by civil servants from different areas of action of the City.

Indeed, the Working Group can be composed of different combinations of service departments depending on the project to be analyzed. In general, the departments that will work on the pacts of collaboration are: Infrastructure and Mobility; Culture, Education and Youth; Municipal Buildings, Heritage and Green Spaces; Commerce, Labor, Innovation and Information System; Directional and Strategic Control; Facility and Subcontracts; Social Policies and Relations with Health Agencies, and finally, the Urban Regeneration, Integration and Design. It is then through the «Co-city» Urban Innovative Actions (UIA) project that the City managed to invest in the urban commons as a lever for addressing key urban governance issues such as poverty, and target the most vulnerable communities in the city. UIA is a EU program aiming at supporting European cities' initiatives to tackle urban intricacies and challenges, experimenting innovative tools. In Turin the UIA Co-City project is carried out through a partnership with the Computer Science Department of the University of Turin, the National Association of Municipalities (ANCI) and the Cascina Roccafranca Foundation. It aims at coordinating the efforts of different urban actors in promoting the implementation of the Turin Regulation. The project provides the renewal of real estate and public spaces considered as urban commons, as instrument of social inclusion and against poverty in many deprived areas of the

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[241] The Working Group was established through an administrative determination, n. 14, approved on March the 3rd 2016, available at http://www.comune.torino.it/benicomuni/bm~doc/determina-dir-gen-istituzione-gdl-2.pdf.

City. The project is coordinated by the City Department for Decentralization, Youth and Equal Opportunities. The Neighborhood's homes network, a policy that the city of Turin is implementing since 2006[242] that promotes the diffusion of community spaces all over the city represent a key platform for the project's implementation. In the Neighborhood's homes, in fact, urban inhabitants will find information on the Co-city projects and the different opportunities it offers and they will find support for drafting proposals of pacts of collaboration. The first step of the UIA Co-city project is the public call launched by the City in June 2017 aimed at collecting citizens' proposals for pacts of collaboration. Thanks to the public call framework[243], the City involves urban communities starting from the initial phase of the regeneration process. The Public Notice lays down the conditions for the submission of proposals aimed at the co-designing process to define pacts of collaboration between the City and active citizens. Adding to the Bologna framework, such a legal device is constructed to improve the resolution of local communities issues, involving city inhabitants without requiring a particular level of expertise and accepting inhabitants' group even if not assembled in associations or organizations. The Notice specifies the objectives that the proposals of collaboration must have in order to be taken into consideration. In particular, such proposals should imply: actions of territorial monitoring and community development, urban cultural production, job opportunities, social innovation and social enterprises, process of social inclusion, cultural diversity, dialogue, equal opportunities and contrast of discriminations, environmental sustainability, urban agriculture and circular economy, and finally, the availability of spaces, services and public initiatives. For each area the city provides a list of streets or building where the intervention is possible or suggested. Proposals must be related to the three type of action of the UIA Co-City project : 1) Peripheries and urban cultures. Through this measure, the city intends to promote regeneration processes of abandoned buildings in peripheries. This is the area

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[242] G. Ferrero, *Welfare urbano e case del quartiere*, in 242 *Urbanistica informazioni* (2012).

[243] The public call was launched by the administrative determination no 30 of May   23rd,   2017,   available   at http://www.comune.torino.it/benicomuni/bm~doc/determina-approv-avvisi-atti.pdf. See also C. Iaione, *The co-city in Turin*, on www.labgov.it.

on which most of UIA's financial resources are concentrated to trigger the regeneration of the buildings or areas (1.100.000 euros), while 600.000 euros are provided for securing the diffusion of the activities on the ground. 2) Underutilized infrastructures for public services. The proposals for this measure are intended to enhance and bring value to the use of urban infrastructures - such as schools, libraries, public offices – whose current use is under their capacity. For this measure, 500.000 euros are allocated for the regeneration activities and 200.000 for securing the communication of activities on the ground. 3) Cure of public space. This measure is aimed at promoting interventions of cure and co-management of public spaces such as gardens and parks, streets or squares that are at risk of decay or under-utilized. 100.000 euros are allocated for the regeneration activities and 15.000 for securing the diffusion of the activities on the ground[244].

3.2.2. Collaboratories to produce knowledge commons and enable collective action

Ostrom and Hess have highlighted that there are two intellectual history of the commons, the narrative of enclosures that talks about privatization and the history of openness democracy and freedom, "the narrative of digital interoperability, open science, collaboratories and scholarly networks, voluntary associations, and collective action[245]". The idea is that of a *collaboratory* as the heart of a methodological process to enable collaboration[246] for the creation of knowledge commons and enabling collective action. Collaboratories[247] were conceived in the late eighties in the field of scientific research on computer science and found application in several fields such as environmental or

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[244] Detailed information on the project's measures and about the areas suggested for interventions by the City are available on the institutional plafform, «First Life» that is also a key part of the project. The First Life platform aims at building a civic social network for urban regeneration processes: https://cocity.firstlife.org/#/.

[245] E. Ostrom & C. Hess (Eds) *Understanding Knowledge As A Commons* cit. at 159.

[246] The key idea behind the development of collaboratories in scientific research is that knowledge is an activity inherently collaborative. T. Finholt, *Collaboratories*, 36 Ann. Rev. Info. Sci. Tech 73-107 (2002).

[247] T. Finholt, *Collaboratories*, cit. at 238, 13 and 327,.

energy research[248]. In the context of the urban pooling, *collaboratory* plays the function of a living lab for innovation in the design of policy solutions at the urban level, which aggregates different actors (social innovations, enterprises, public institutions, knowledge institutions) for making them co-design together and syntesyse the approach of the city to collaborative economy, social innovation and commons. In the *collaboratory*, a process of knowledge and skills agglomeration is triggered. The key idea behind the development of collaboratories in scientific research is that knowledge is an activity inherently collaborative[249]. The collaboratory is a physical or virtual setting where innovative and cultural forces of the city converge, share resources and knowledge and join efforts for generating cognitive commons. It ultimately acts as a catalyst that foster mutual learning and co-creation[250].

3.2.3. Community cooperatives for neighborhood infrastructures.

The production and governance of infrastructure commons at the neighborhood level could be performed through several structures. More specifically, with regards to the energy self-production, the neighborhood community could set up a micro-grid[251] that will make the district self-sufficient. This might happen through different forms of financing, for instance national and international incentives for energy efficiency. Through incentives, therefore, the community will be able to install photovoltaic systems that will be owned and managed by the community itself. The energy produced might also be able to support the creation of a Community network so that the local community can self-manage and share the wireless mesh network.

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[248] H.D. Grimes, *Creating a collaboratory environment to transcend traditional research barriers: insights from the United States,* 19 Energy Research & Social science 37-38 (2016).

[249] T. Finholt, *Collaboratories*, cit. at 238.

[250] E. Ostrom & C. Hess (Eds) *Understanding Knowledge As A Commons* cit. at 159, 13 and 327.

[251] For an overview on the regulatory options and innovative solutions for community infrastructure, see the strategy card text by J. Duda, T. Hanna and M. Burke, *Building Community capacity for energy democracy: a deck of strategies*, Democracy Collaborative, available at http://prototypes.democracycollaborative.org/energydemocracy/fullscreen.ht ml.

In this model, no one owns the entire infrastructure (open and free access), but everyone who wants to access can contributes with its own resources to run the network which, in turn, is controlled only by the community (community governance). In addition, the management of the WiFi network from the local communities would facilitate the of the digital collaborative platform (therefore facilitating the dialogue between the actors in the local community), the carriage of information regarding the consumption / energy impact of technological innovations implemented by the community itself and free internet access inspired to the principle of the Net equality, as outlined by Sylvain[252].The mesh wireless network is been implemented in some cases[253] at the EU level, and might find its own regulatory framework in European and national legislation. Another interesting case of open wireless network, with a focus on the educational approach with the purpose of contributing to the reduction of the digital divide is the Red Hook Wifi Initiative[254]. The collective production and management of energy and communication infrastructure could be the first ground for the development of neighborhood cooperatives, or community cooperatives as legal and governance structure for urban pooling. The governance arrangement on which the community cooperative is grounded must be inspired by the principle of the public-private-commons partnership, one of the basic lines of intervention aimed at the creation of forms of public-private nonprofit partnerships for urban commons governance.

4. Concluding remarks on the right to social and economic pooling

The fourth urban vision, the rights-based vision of the city, built either on a rebel city or on a collaborative city approach, seems to rely heavily on a sort of "right to social and economic pooling" as part of a vision of the city based on the right to the city

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[252] O. Sylvain, *Network Equality*, 67 Hastings L. J. 443 (2016).

[253] Guifi, Spanish community network: www./guifi.net; Germany, Freifunk: https://freifunk.net/en/; AWMN, greek community network: ww.wind.awmn.net/; In Italy, the Neco Project; www.progettoneco.org/la-rete/ and Ninux: http://map.ninux.org/. For an analysis of the functioning of those network, see the Horizon 2020 research project based at the University of Trento NetCommons. Deliverables are available at http://netcommons.eu/.

[254] See the description of the Red Hook Community WiFi project available at http://redhookwifi.org/ (last visited 19 October 2016).

framework. This right to social and economic pooling should be therefore the defining element of a co-city. There are four main pillars around which the right to pooling and therefore the co-city should be structured.

The first one is an urban constitutional claim for urban co-governance[255]. This implies the recognition of the emerging role played by the collectivity and therefore of legal, political, institutional subjectivity to the fifth actor of the quintuple helix or pentahelix model[256], the civic actor (composed of collectives, active citizens, social innovators, city makers, digital artisans, urban farmers, co-workers, digital collectives, etc.), represents a novelty and a challenge urban constitutional lawyers and urban governance scholars should take on. Urban constitutionality[257] requires a rethinking of the urban democratic and policy making process and involves an internal reorganization of public administration, both structurally and mentally, in order to develop a new kind of relationship with citizens, based on coordination and distribution of power instead of limitations, restrictions, and separations of powers.

The notion of pooling applied to the urban context envisions the emergence of a "last mile" democracy. This requires the building of a governance strategy able to strengthen the capacity to cooperate of the five urban / local actors (public, private, social, cognitive, and, above all, the civic) to carry through co-design techniques the co-production of community commons and services and the co-creation of institutions and rules to govern the co-city. The pooling governance might be expressed through an urban co-governance matrix, bases on an incremental multi-layered principle. The main cleavage on which the urban co-governance matrix is based is the distinction between *sharing* and *collaboration*, as design principles for the governance schemes. At the very first level, we might encounter shared governance, i.e. a governance scheme in which small scale intervention are governed through bilateral pact of collaboration for the care and management of the urban commons; at the second and third level,

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[255] C. Iaione, *Governing the urban commons,* 1 I.J.P.L. 170 (2015).

[256] C. Iaione & P. Cannavò, *The Collaborative and Polycentric Governance of the Urban and Local Commons*, 5 Urban Pamphleteer 29 (2015).

[257] T. Haller, G. Acciaioli & S. Rist, *Constitutionality: Conditions for Crafting Local Ownership of Institution-Building Processes',* 1 *Society and Natural Resources* 68-87 (2016).

we find cooperative and collaborative governance. This kind of arrangements are activated when the scale of the resource becomes more complex, in a constructed environment where sharing is not enough and production is needed. In this layer, new resources and institutions are generated through cooperation and collaboration, until you get to *polycentricity*[258], the last and most complex layer. In the latter case co-production of services of general interest and commons is implemented in a hyper-politicized, hyper-heterogeneous and diversified context, the complexity of which entails the need to formulate new rules with new actors. The principle of polycentrism, as outlined elsewhere[259], envisions a myriad of autonomous self-organizing centers from decision point of view that are coordinated and connection between them and with the external environment. On the base of this matrix, the five actors of pooling governance can come together and work together at the neighborhood level or at the small/medium size city level.

The transition to the city as a commons implies a transition from the Leviathan/Gargantua[260] form of State, which dominated the modern statehood model, to a Plaftorm State. There are, in fact, several theoretical models to describe the different forms taken in the course of history by the State (Leviathan; Welfare State; Regulatory State), overlapped over time, and resulted in a very complex situation. The constant need for reform of the form of State was first interpreted through the "new public management" in the eighties and then through the perspective of the new public governance[261]. The current social and economic transitions might envisage a new morphology of the State: the enabling, relational, entrepreneurial[262] State. The hypothesis that

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[258] S. Foster and C. Iaione, *The city as a commons,* cit. at 62.

[259] S. Foster and C. Iaione, *The city as a commons,* cit. at 62.

[260] The clarification of the notion of polycentric governance, first introduced by V. Ostrom, C. Tiebout and R. Warren, *The Organization of Government in Metropolitan Areas: A Theoretical Inquiry*, Am. Pol. Sci. Rev., Vol. 55, No. 4 (1961), and later by E. Ostrom, *Beyond Markets and States: Polycentric Governance of Complex Economic System*, 100 Am. Econ. Rev. 3, 641-72 (2010). The application of the notion of polycentricity to the governance of the city as a commons is been discussed in S. Foster and C. Iaione, *The city as a commons,* cit. at 62.

[261] S. Osborne, *The New Public Governance,* 8 Pub. Mgmt. Rev. 3 (2006).

[262] M. Mazzucato, *The entrepreneurial state: debunking public vs. private sector myths,* cit. at 227; S. Foster, *The city as an ecological space: social capital and land use,* cit. at 42; G. Cook, R. Muir, *The relational State. How recognizing the importance of*

this paper is advancing is that there is an additional characteristic of the current form of State, that makes it a platform State, where traditional functions of the Leviathan State and the Welfare state still remains, accompanied by new challenges.

The introduction of the Platform State must imply the re-scaling of the State. The most appropriate scale at which the State can operates in cooperation with the collectivity is the urban/local level. It is the most adequate level for the promotion of an experimental and applies co-governance. This form of State might only emerge from the local experimentation of institutional, social and economic innovations and therefore from the process and the methodology on which the co-city is based. The Platform State is therefore a relational, enabling, facilitating State, that plays a central role in incentivizing and supporting the efforts of the other actors in taking care of shared resources[263], engage itself in a collaborative/polycentric approach to urban governance, facilitates[264] the conditions for which actors can develop social relationship[265]. The starting point of the Platform State need to inspire also the next-generation of administrative action, which overcomes the traditional administrative schemes, based on authority and hierarchy or service provision and outsourcing, to embrace collaboration with different actors in which government plays a pivoting role.

Within a Platform State framework, the government seeks to initiate stable partnerships between the "public as a person" (public institutions, the state as an apparatus) and the "public as a community" or "communities" (composed by the four other actors of co-governance). The Platform State is therefore *unionizing*, meaning that it aims at forming civic unions or urban assemblies[266]. The impact of the widespread phenomena of the sharing economy is bringing out the debate on work protection

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human relations could revolutionize the role of the state, 23 (Institute for public policy research, London, 2012).

[263] S. Foster, *The city as an ecological space*, cit at 42.

[264] G. Cook, R. Muir, *The Relational State. How Recognizing The Importance Of Human Relations Could Revolutionize The Role Of The State,* cit. at 253.

[265] G. Cook, R. Muir, *The Relational State. How Recognizing The Importance Of Human Relations Could Revolutionize The Role Of The State* cit. at 253.

[266] T. Scholtz, *Platform cooperativism,* 14-16 (2016).

and unionization[267]. Scholtz argued that a model of platform cooperativism is emerging from the ground[268], with cooperatively owned/democratically governed digital platform might constitutes an alternative to the model of value creation embraced by the dominant sharing economy corporations[269]. Building on this approach, the right to pooling would require the formation of civic unions, divided accordingly to the urban clusters (in terms of content or commons) that would represent a network of organization and protection in order to coordinate the activities.

The third pillar is the recognition of urban pooling rights. Urban pooling rights are the main pillars of a co-city. The right to co-live (e.g. co-housing, community land trusts), the right to co-produce (e.g. collaborative economy, collaborative services such as micro grids, wireless community networks, neighborhood community infrastructure and social innovation such as social impact bonds; Culture, through the implementation of the Faro Convention on the value of cultural heritage for society, signed by Italy in 2013), the right to co-develop (co-management of urban commons, with tools such as the Regulation for Public Governance of the Urban Commons introduced above or the approach recently followed by Italian Cities such as Naples and Palermo of the Declaration of Civic and Collective Urban Uses) should be injected in the urban regulatory framework and become one of the key features of the "law of cities" or "urban law".

Finally, a fundamental characteristic of the co-city paradigm should be experimentalism. For implementing an appropriate methodology, the development of a *CO-City Applied Research Protocol* is needed[270]. The conceptual baseline is grounded in the literature on field[271] and experimental applied research[272],

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[267] G. Spencer, *The Union Economy Doesn't Work In A Sharing Economy*, FORBES available at http://www.forbes.com/sites/realspin/2016/02/17/unions-uber-economy/#7ca69fa66a99 (last visited February 12th, 2017).

[268] T. Scholtz, *Platform cooperativism* cit. at 257.

[269] Some example already exists, such as Cooperatively Owned Online Labor Brokerages and Market Places, such as Coopify or Fairmondo, or City-Owned Platform Cooperatives. T. Scholtz, *Platform cooperativism* cit. at 257.

[270] See S. Foster and C. Iaione, *The city as a commons*, cit. at 62.

[271] The approaches that study the city as a socio-ecological system has highlighted that a scientific approach to the city inevitably results as applied, experimental and local, and suggest the implementation of multiple low-cost experiment of governance innovation, in order to maximize the possibilities that the urban context might offers of a real-time laboratory in the real world, in

and research action/participatory action research[273], with a trans-disciplinary approach that would allow us to overcome the challenges and obstacles that every methodology brings, and take advantage of the synergies that would be created. The experimentation should be conducted through a methodological process centered on the implementation of the CO-city protocol, deeply grounded in the local context. This would means that the standardization would involve the process and the method, not the tools/instruments/output applied in the several contexts. The analysis presented here provides an introduction to the theoretical framework for the conceptualization of the pooling city and suggests the main trajectories for the definition of the pooling city as a rights-based urban model/vision. A proposal to study/develop/adapt/test/measure should be build on three main components: 1) the design principles to bring the Commons in the City and transform the City into a Commons and their gradient. 2)the process, process to bring the Commons in the City and transform the City into a Commons. The local-experimental approach requires the necessity of a methodological tool that guides the action of local institutional actors for the development of an appropriate urban co-governance strategy. 3) the tools for the pooling city. The creation of a toolbox and/or a certifying voluntary standard setting institution like those that work in the networked information economy (3GPP, Wifi Alliance, ETSI, WRC, IEEE, IETF and other standard setting bodies).

The main aim of future research on governance of the city as a commons is to explore the possibility to understand some features of public law operating in the urban context as the "urban law of society". This approach brings necessary reflections in the field of local public law, and should be investigated with an attention to the innovative insights provided by democratic experimentalism[274]. Davidson[275] outlines that there is not a simple

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which one can observe the processes and work with the subject of the policy at the same time. J.P. Evans, *Resilience, ecology and adaptation in the experimental city,* Transactions of the Institute of Brit. Geographers, 230 (2011).

[272] A. Poteete, M.A. Janssen, E. Ostrom, *Working togheter: collective action, the commons, and multiple methods in practice*, 17-30 (2010).

[273] E. Ostrom, *In pursuit of comparable concepts and data about collective action*, 82 Agric. Syst. 215–232 (2004). See also F. Baum, C. MacDougall, and D. Smith *Participatory action research,* 60 J Epidemiol. Community Health 854–857 (2006).

[274] C. Sabel and M. Dorf, *A Constitution of Democratic Experimentalism,* 98 Colum. L. Rev. 267 (1998).

definition of urban law, taking into account that the subjects that matter for it are fragmented in different disciplines and left to different legal categories; (public, constitutional and administrative, local government property, public contracts, local public services, environmental law). The study of the commons in the city and the city as a commons offers a good observation point for the purpose of defining the borders and baseline objective of an urban law, precisely because of the crucial role played in cities by social norms, social institutions, and social duties. In order to enrich the understanding about the process of transformation in which public law finds itself, according to Auby, legal scholars need to start from the observation of concrete realities such as cities[276], were urbanization is shaping what Eric Biber identifies as the law in the Anthropocene[277].

The approach presented in this paper conceptualizes the commons as infrastructure for urban pooling. Further research will be needed to analyze in depth what is the baseline of a co-city, starting from an exhaustive explanation of the background theories, the theoretical framework and the design principles, methodological process and the institutional/legal/policy tools. This approach combines theoretical and applied research. The task to articulate, explore, test and analyze this framework is a multiyear project. The ultimate goal is to understand whether and how a transnational, cross-cutting and cross-border body of law can be produced by society in urban areas.

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[275] N. Davidson, *What is urban law today?* 40 Fordham Urb. L. J. 1579 (2013).

[276] J.B. Auby, *The role of law in the legal status and power of cities. Droit de la ville. An introduction*, 2 I.J.P.L. 302 (2013).

[277] E. Biber, *Law in the Anthropocene epoch,* UC Berkeley Public Law Research Paper No. 2834037 (2016).